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The Journal of the Fire Protection Profession

SEPTEMBER 16, 1931

National Firemen's Parade at Washington, D. C.

ESTABLISHED 1877 PUBLISHED BI-WEEKLY

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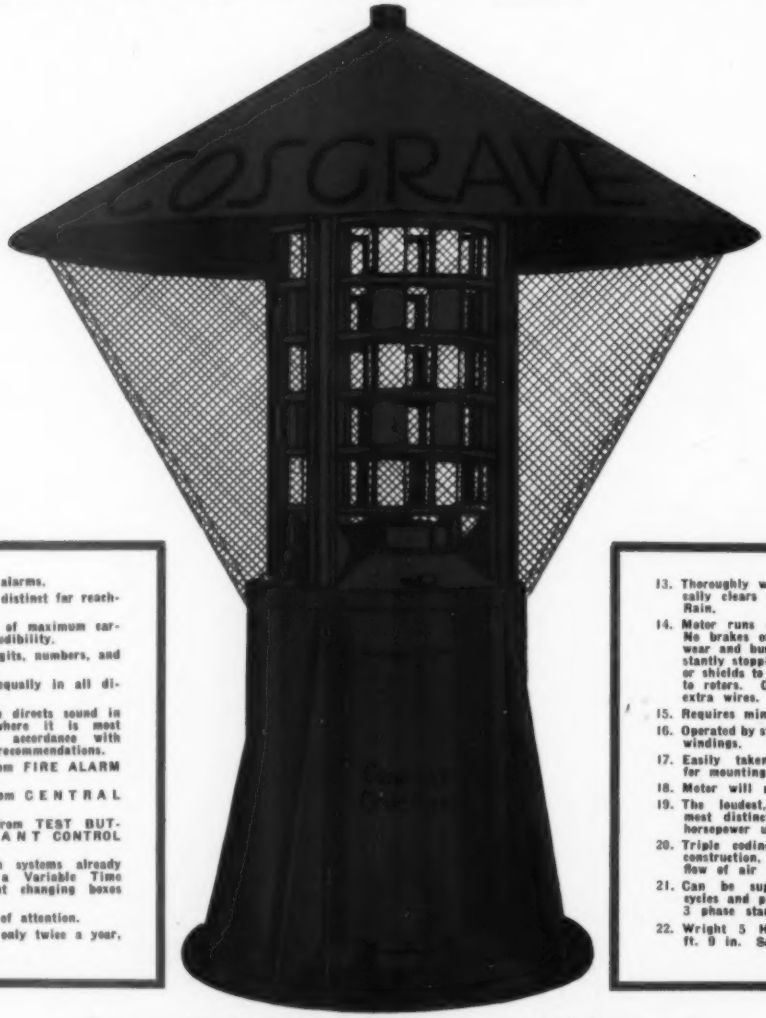

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Published Every-Other Wednesday

SUBSCRIPTION PRICE
U. S., $3 a year; Canada and Foreign $4; Single copies 25c

Issued by CASE-SHEPPERD-MANN PUBLISHING CORPORATION
Also publishers of "Water Works Engineering," "Municipal Sanitation," Technical Books, etc.
24 West 40th Street, New York City
Western Office, 30 No. Michigan Ave., Chicago
Pacific Coast, 1045 Sansome St., San Francisco

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The Publishers

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Contents of this issue copyrighted, 1931, by the Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York City.
Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

Profit from the experience of your friends, the police

Sergeant Newell, of the Boston police department, sending an alarm to 21 district stations. All will receive it simultaneously in legible typewritten form.

Teletypewriter Service

Do as they do and speed up your alarms by using this machine that sends typewriting by wire!

THE police of New York, Chicago, Boston, Philadelphia, Detroit, St. Louis, San Francisco and hundreds of other cities have long utilized Teletype. By flashing crime news to stations with lightning speed and in clearly-understandable typewritten form, it has greatly increased the efficiency of many a department. And now fire departments are also beginning to recognize the possibilities of this machine that transmits typewriting by wire.

With the aid of Teletype, your central office operator can in a few seconds' time transmit the exact address of a still alarm and have it recorded in such a manner that any misunderstanding will be quite impossible. Alarms can be sent to any one station, to any group of stations or simultaneously to *all* stations.

The tape teletype, which is the model recommended for fire alarm system work, prints its messages in a continuous line on a narrow paper tape that can be torn off and carried by the driver. It operates just like a typewriter and has a capacity of 370 letters or figures per minute . . . a speed sufficient to allow of sending a still alarm such as "GARAGE FIRE IN REAR OF 384 WEST STATE ST." in about 7 seconds' time.

Teletypes to the number of 65,000 are now being used, not only by police departments but by railroads, air lines, telegraph companies, press associations and others requiring an extremely speedy and accurate means of communication. For further information consult your local telephone company or write the Teletype Corporation, 1400 Wrightwood Ave., Chicago.

TELETYPE

SUBSIDIARY OF

Western Electric Company

PORT JERVIS *jumps* BOX ALARMS *from* 1% to 97%

The fire alarm system was designed entirely for emergency use such as fire alarms demand. It provides a QUICK and ACCURATE contact with the fire department.

CITY OF PORT JERVIS, N. Y.
CITY CLERK'S OFFICE

June 16, 1931.

The Gamewell Company,
Newton, Mass.

Gentlemen:

In reply to your inquiry of the 14th. inst., you are advised as follows:

1 Number of fire alarm boxes under old system was 12.

2 Percentage of box alarms received over period of two or three years before new system was installed was approximately 1%.

3 Number of fire alarm boxes under our new system, 66.

4 Percentage of box alarms received since installation of new system is approximately 97%.

5 Fire area is approximately 1550 acres.

Very truly yours,

City Clerk

The telephone was designed primarily for business and social communication, which purpose it serves very well. Because of the chances for disastrous delay in an emergency, the phone should not be used for transmitting fire alarms.

INCREASE YOUR FIRE ALARM BOX DISTRIBUTION AND YOU INCREASE YOUR BOX ALARMS

SINCE alarms received through fire alarm boxes are the only safe ones, it is naturally the object of every fire chief to maintain a high percentage of box alarms. Unless you install an adequate number of fire alarm boxes from year to year in order to keep in step with the growth of your city, it will be impossible for you to maintain the much desired high percentage of box alarms.

Naturally, if your city has no fire alarm boxes at all, it can receive no box alarms. If your city has only one-quarter or one-half of its requirements, it will receive only one-quarter or one-half of the box alarms that it should. That is simple logic.

The letter from Mr. J. F. Cleary, City Clerk of Port Jervis, N. Y., reproduced on this page, offers practical evidence of this fact. By increasing the number of fire alarm boxes from 12 to 66, Port Jervis increased its box alarms from 1% to 97%. By increasing the fire alarm box distribution in your own city, you too can increase the percentage of your box alarms.

THE GAMEWELL COMPANY
NEWTON, MASSACHUSETTS
"A Box A Block"

FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXIV SEPTEMBER 16, 1931 NUMBER 19

A Building Code, the First Step in Fire Prevention

Need for the Regulation of Building in a City or Town — What a Well Formulated Code Should Cover—Enforcement Clauses Important

By E. V. KING, State Superintendent, West Virginia Inspection Bureau

One of the first steps in fire prevention that a city government must take and also one of the most important is the formulation of a well prepared building code. The following paper presents some excellent suggestions as to what such a code should embrace:

THERE are many avenues of approach to this fire prevention problem, all of which are worth while considering, but the subject is too broad to be covered in a brief paper, so I am going to confine my remarks to the one phase of this work "Building Codes and Fire Prevention."

Let me say at the outset that I am not one who believes that legislation is a panacea for all ills and I sometimes feel that we could well get along with much less than we have, but we all must realize the necessity for a certain amount of legislation in order that our complex system of society may function without too much infringement on the rights of others, and that the greatest good for the greatest number of people may obtain.

One Man's Fire of Concern to All

Property owners, merchants, manufacturers and others are interested primarily in production and sale of commodities and seldom have sufficient knowledge of construction, hazards and protective devices to enable them to make their business safe from fire, and in our congested towns and cities one man's fire becomes of grave concern to all property owners in the vicinity, for our greatest conflagrations have all had small beginnings. It therefore behooves every community, large or small, to give thoughtful consideration to the adoption and proper enforcement of adequate building laws and fire prevention ordinances.

Firemen who are spending their lives in fighting fires realize the need of suitable building construction, proper installation of hazardous materials, and protective devices, but it is sometimes difficult to sell the citizens and City Fathers on these ideas, because they do not realize the seriousness of their fire problem, and this is where firemen can be of great service to their communities in directing and advising them along the right lines.

Some one has aptly said, "The time to save a building from fire is when the plans are on the drafting board." Architects and builders can be of great assistance in fire prevention work by keeping this thought in mind, and while we find them giving more thought to this phase of their work as time goes on, we still find many who are chiefly concerned with appearance, arrangement and cost, giving little consideration to safety from fire. Since the general public is without sufficient knowledge to guide them in these matters it becomes necessary for the town or city to provide, by ordinance, suitable regulations of a fire prevention nature that all may benefit thereby.

The need for building regulation was felt at an early date in this country and we find that in 1679 the city of Boston established a building code which no doubt had a bearing on the type of construction permitted in later years in the congested business section.

More Important Features of a Good Building Code

Let us now consider briefly the more important features of a good building code. The first thing to consider is the establishment of fire limits and specifying the type of construction to be permitted in various districts. The fire limits should include all closely-built mercantile and adjoining manufacturing sections and surrounding blocks on all sides which constitute an exposure to the district, or within which new construction of a mercantile or manufacturing character is developing. It is very important that the limits allow for extension as the city grows.

Within these limits only the better types of construction should be permitted and all frame construction prohibited entirely except for temporary structures of small area. Buildings of ordinary brick joist construction should be limited as to area and height, and vertical and horizontal openings of all kinds properly protected. Buildings housing hazardous occupancies, and buildings designed for hospitals, jails, hotels, theaters and similar occupancies, should be of fireproof construction throughout or protected by standard automatic sprinkler systems. These and many other restrictive measures are included in the modern building code of our larger

"Since the general public is without sufficient knowledge to guide them in matters of safe building construction, it becomes necessary for the town or city to provide, by ordinance, suitable regulations of a fire prevention nature that all may benefit thereby."

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cities and towns in order to minimize the chance of fire originating and spreading in the high value districts.

What Various Sections of Code Should Cover

The various sections of the code will cover definitely the details of construction and specify the types and kinds of material that may be used, the height and area of different types of construction, light and ventilation, means of egress, chimneys and flues, heat appliances, elevators, electrical and plumbing installations, special occupancies such as garages, theaters, etc., fire extinguishing equipment, and all other factors embracing good engineering practice and safety to life and property. One of the most important factors, and one which is most often neglected, is the proper protection of all openings in exterior walls which are subject to exposure from nearby buildings, by approved type fire shutters or wired glass windows in approved metal frames. The failure to protect such openings is most generally the cause of wide spread conflagrations, and makes it most difficult for the fire department to confine a fire to the building in which it originates.

Regulation of Hazardous Materials and Processes

So far, I have only touched upon the structural features which are usually contained in the building code proper, and while these are essential to the proper construction and location of buildings, our scheme of fire prevention would not be complete without supplemental ordinances prescribing regulations for fire prevention and protection in connection with hazardous materials and processes. Many large losses of national importance could have been prevented by adoption and enforcement of suitable fire prevention ordinances and no doubt many can recall some serious fire which would not have occurred, or would not have been of the same serious nature, if proper precautions had been taken with storage of hazardous materials, or if suitable fire protection equipment had been provided.

The National Board of Fire Underwriters has for many years issued regulations dealing with hazards and protective devices, and these regulations have been adopted by many municipalities and enforced as mandatory ordinances. Recently, the National Board of Fire Underwriters codified these various regulations and issued a pamphlet of a "Suggested Fire Prevention Ordinance." This ordinance does not cover all of the hazardous materials or provide the utmost protection in any case, but deals with the hazards most commonly found in cities and towns, as for example: Explosives, Pyrotechnics and Small Arm Ammunition, Nitrocellulose, Motion Picture Film, Pyroxlin Plastic, Photographic and X-ray Nitro-cellulose Film, Calcium Carbide and Acetylene, Compressed Gas Systems, Flammable Liquids, Painting and Paint Spraying and Dipping, Dry Cleaning and Dyeing, Hazardous Chemicals, Matches, Automobile Garages and Repair Shops, Gas Appliances and Connections, and numerous miscellaneous materials. The industrial world is moving fast and almost every day some new material or process is being introduced to the public and in many cases these new materials and processes develop severe fire hazards that are unknown to the user, and unless properly safeguarded, may become a severe menace to large sections of a community.

Regulations Outside of Fire Limits

These regulations are intended primarily for buildings within the fire limits; however there are certain restrictions that should also apply to sections outside of the fire limits. Frame construction in outlying and residential sections is generally permitted, but the conflagration hazard should be guarded against by adequate fire protection and sufficient spacing between buildings. Shingle roofs have been the cause of widespread conflagration in a number of our cities and the use of the wooden shingle should be prohibited within the corporate limits. The same general regulations for chimneys and flues, heating arrangements, electrical wiring for light and power, plumbing and gas appliances for buildings within the fire limits should also apply to the outlying sections.

Regulation of Public Institutions

There is also a class of buildings usually found in the residential or outlying sections of our cities and towns which are too often neglected from a fire safety standpoint, with disastrous results to life and property. I speak of hospitals, asylums, homes for the aged and incurable, and similar institutions, in which the occupants are unable to help themselves in escaping from the building in case of fire. Too much precaution cannot be taken to safeguard the lives of the occupants of these institutions, and the regulations for construction and safeguarding of hazards should be of the severest nature if we are to protect the lives of those confined therein from such a disaster as that which occurred recently in an institution in Pittsburgh. I regret to say that we have a number of institutions in our own state that are far from safe from such terrible disasters, and I appeal to you men to use every effort and influence to see that such institutions in your communities are properly safeguarded.

Enforcement of the Ordinances

We now come to the most important question of all—the enforcement of the building code and fire prevention ordinances. No matter how well your code and ordinances are drawn, without proper and intelligent enforcement they are more or less worthless, and careful consideration should be given to the selection of officials. In the larger towns and cities the enforcement of the building code is usually in the hands of the building inspector and this official should be fully qualified by experience and education in building construction to intelligently enforce the code. In small communities the enforcement of building laws usually falls to the lot of the Fire Chief.

For ordinances dealing with the cause of fire or protection against fire, it is believed that it should be a function of the Fire Department to enforce such ordinances. In the small city or town there is no need of a special bureau, as the Chief and company officers should be able to carry out the provisions of the ordinance. In cities of large size, where industries are large and involve complicated handling of materials, there will be need of specially trained men with a thorough knowledge of various engineering principles and practice with a well organized fire prevention bureau to cope with the various problems that will confront them.

Improvement brought about by the adoption and enforcement of a comprehensive building code and fire prevention ordinance will, of course, take place gradually, for old buildings cannot be torn down at once or remodeled to conform to the new regulations, but the municipalities' fire hazard will be materially lowered as time goes on and all new buildings and hazards are properly constructed and safeguarded. This will result in many benefits to the property owner, not the least of which will be much lower fire insurance rates, since fire insurance rates are largely dependent on construction and safeguarding of hazards of occupancy.

(Excerpts from a paper read before the First Annual Fire Service Extension School of West Virginia.)

Fire House Opened in Signal Hill

A new fire station, having four times the floor space of the old building, has been opened in Signal Hill, Cal.

The building is one story high and has a lookout tower. The exterior is light colored stucco. The apparatus room has

New Station Recently Opened in Signal Hill, Cal.

a red tile floor and has space for two pieces of apparatus. On the west side of the building is a large recreation room. The dormitory has shower baths and a linen closet. The kitchen is completely equipped. All floors of the living quarters are of oak.

The department has one 750-gallon American-LaFrance pumper, one 900-gallon Ahrens-Fox pumper equipped with a 40-gallon foam tank and a 100-gallon booster tank, and a chief's car. There are thirteen full paid men in the department, including the Chief.

Interpretation of and Insuring Conviction Under

The Laws on Arson

Construction of the Law by Wisconsin Court—Laws as to an Accessory—Investigation of Fire—Insuring Proper Evidence

By JOSEPH E. MESSERSCHMIDT, Assistant Attorney General of Wisconsin, Madison, Wis.

The part of the Fire Chief and his men in the apprehension and conviction of the arsonist is an important one. They are in an excellent position, being usually the first to arrive at an incendiary fire, to discover important evidence to assist in this purpose. The following paper emphasizes this point:

IN this paper we will confine ourselves to pointing out some of the main features of the "Model Arson Law," as enacted in twenty-seven states of the Union. The first section of this law, as adopted in the state of Wisconsin, provides:

Sec. 343.01. "Any person who wilfully and maliciously sets fire to or burns or causes to be burned or who aids, counsels or procures the burning of any dwelling house, or any kitchen, shop, barn, stable or other outhouse that is parcel thereof, or belonging to or adjoining thereto, owned by himself or another, shall be deemed guilty of arson. . ."

The punishment is fixed at not less than two nor more than twenty years in state prison. You will note that the common law here has been extended so that a person is guilty of arson, who burns his own habitation. It covers the house and buildings within its curtilage.

The second section provides:

Sec. 343.02. "Any person who wilfully and maliciously sets fire to or burns or causes to be burned or who aids, counsels or procures the burning of any barn, stable, garage or other building, owned by himself or another, not a parcel of a dwelling house; or any shop, storehouse, warehouse, factory, mill or other building, owned by himself or another; or any church, meetinghouse, courthouse, workhouse, school, jail or other public building or any public bridge. . . ."

The punishment is fixed at from one to ten years in state prison. This covers buildings other than those in the curtilage of the home.

Then we have a section covering personal property which provides:

Sec. 343.03. "Any person who wilfully and maliciously sets fire to or burns or causes to be burned or who aids, counsels or procures the burning of any barrack, cock, crib, rick or stack of hay, . . . or grain of any kind; or any pile of coal, wood or other fuel; or any pile of planks, boards, posts, rails or other lumber; or any street car, railway car, ship, boat or other water craft, automobile or other motor vehicle; or any other personal property not herein specifically named, owned by another and of the value of twenty-five dollars or more. . . ."

The penalty is from one to three years in state prison. It applies only to personal property owned by another and of the value of twenty-five dollars or more.

Then we have another section which provides that:

Sec. 343.04. "Any person who wilfully and with intent to injure or defraud the insurer sets fire to or burns or causes to be burned or who aids, counsels or procures the burning of any goods, wares, merchandise or other chattels or personal property of any kind, whether such property is owned by himself or another, which at the time is insured by any person or corporation against loss or damage by fire. . . ."

You will note that this covers personal property only owned by himself or another. Punishment is from one to five years in state prison.

Sec. 343.05, (1). "Any person who wilfully and maliciously attempts to set fire to or attempts to burn or to aid, counsel or procure the burning of any of the buildings or property mentioned in the foregoing sections, or who commits any act preliminary thereto or in furtherance thereof, shall . . . be punished by a fine of not more than one thousand dollars or by imprisonment in the state prison for not less than one year nor more than two years."

Sec. 343.05, (2). "The placing or distributing of any inflammable, explosive or combustible material or substance or any device in any building or property mentioned in the foregoing sections in an arrangement or preparation with intent to eventually wilfully and maliciously set fire to or burn same, or to procure the setting fire to or burning of same, shall . . . constitute an attempt to burn such building or property."

"As arson is generally not committed in the presence of witnesses and as defendants are not willing to confess their guilt, the crimes must generally be proved by circumstantial evidence. This is a difficult matter. Contrary to common belief, such evidence is not always weak. Facts and circumstances may be so convincing that they demonstrate to a certainty the guilt of a defendant."

Law Construed Twice in Wisconsin

This Model Arson Law as enacted by Wisconsin and most of the states has been construed by our supreme court twice.

In the case of Boardman v. State, 233 C. W. 556, the defendant was convicted of setting fire to a fishing shack in Crawford County. The building was of small dimension, ten by twelve feet, built of rough boards and lined with building paper. It had a window on one side and had a door and was equipped with a cot and an old kitchen stove. During the summer the defendant lived in this building a considerable portion of the time, but it was unfit for occupancy in cold weather. There were two counts in the information, one charging the defendant with burning a dwelling house and the second charging him with burning of a building, not a parcel of a dwelling house. The trial court held that it was not a dwelling house and submitted the second count to the jury only, which convicted him.

The question before the supreme court was whether this building was covered by our model arson law. A fishing shack is not named in the statute. The question involved a very interesting point of statutory construction. The question was whether the doctrine of Ejusdem Generis was applicable. This rule provides that where specific words are enumerated followed by general words, the general words include only such as are similar to those enumerated specifically. For instance, where it says any barn, stable, garage or other building, the general words "other building" can only mean buildings similar to those enumerated. Because the word "barn" is enumerated, similar buildings as graineries, corncribs, and haysheds may be covered by the general words. The term "stables," which shelters animals, may be similar to chickencoops and pigsties. Because of the word "garage" it may be argued that the statutes includes wagon-sheds, buggy-sheds and machine-sheds. It was evident that fishing shack, not being enumerated and not being similar to any of the buildings specifically named, the arson law would not apply if the doctrine of Ejusdem Generis would be applicable. The court ruled that that doctrine was simply a rule of construction which the court was not compelled to follow; that such rules are not the masters of the courts but merely their servants to aid them in ascertaining the legislative intent.

And as the court construed the law, arson may now be committed in Wisconsin by the burning of a dwelling house, of the buildings that are parcel thereof, or belonging to or adjoining thereto, belonging to himself or another. It may also be committed by burning any building not parcel of a

dwelling house belonging to himself or another, irrespective of the value of the building. Arson may also be committed by burning personal property, the property of another which is of the value of twenty-five dollars or more. Arson may further be committed by burning any personal property either belonging to himself or another with intent to injure or defraud an insurance company, and it is also a crime to attempt to commit arson by wilfully and maliciously attempting to set fire or attempting to burn the building or property covered by our arson statute. It is to be noted that the foregoing statutes use the words "to aid, counsel or procure the burning, etc."

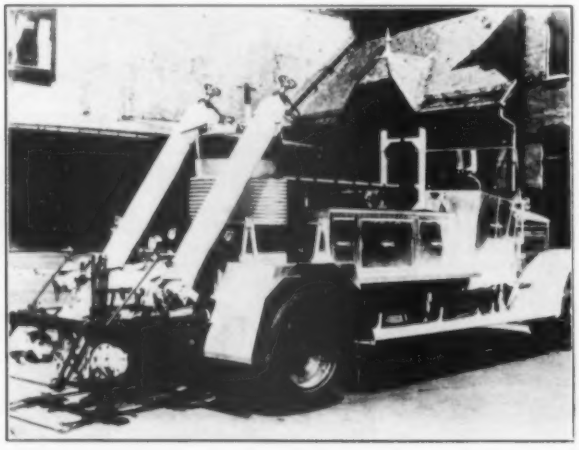
Important Point as to an Accessory

In this connection it must be remembered that there is an important point of law involved in these words. If a person aids another while he is in the presence of the other, he is a principal in the crime and equally guilty with the one who actually perpetrates it. If, however, one aids, counsels or procures the burning of a building not being present when the crime is perpetrated, then he is not a principal but an accessory before the facts. If one is charged with the crime of arson, it is proper to prove that he either committed the crime himself or aided, counseled or procured the burning to be done by another when the other person was committing it in his presence; but you cannot under such charge prove that he was an accessory before the fact that he aided, or counseled or procured it to be done when he was not in the presence of the perpetrator of the crime when the crime was committed.

In other words, to be an accessory is to be guilty of a separate crime and our supreme court has held that although an accessory can be convicted when the principal has not been convicted, thus changing an old principle of the common law, one cannot be convicted as an accessory if he is simply charged as a principal. It is sometimes difficult to tell beforehand whether the party who aided, counseled or procured the burning to be done was actually present or not present. In all such cases in order to meet the exigencies of the case, the court permits us to file two counts, one charging the defendant as principal, and the other as accessory before the fact; and after all evidence is in, we may then be required to select which one of the two we selected as the one to be relied upon. This is to prevent the defendant from clearing himself by a legal trick. If he were charged as a principal and the evidence showed that he aided, counseled and procured the burning to be done, which he might prove, either by himself or by other witnesses while he was absent when the crime was committed, he could not be convicted and having been in jeopardy might go free.

Investigation of Fire

That the law-makers of Wisconsin have considered the crime of arson as a serious crime is shown by the fact that the office of Fire Marshal was created to aid the local authorities in investigating and detecting the guilty parties where it appeared that a fire is of incendiary origin. Section 200.19 makes it a duty of the State Fire Marshal and the Chief of the Fire Department of every city or village in which a Fire Department is established, and the Mayor of every incorporated city and the President of the village of every incorporated village in which no fire department exists, and the Town Clerk of every organized township within the limits of any organized city or village to investigate or cause to be investigated the cause, origin and circumstances of every fire occurring in such city, village or town, by which property had been destroyed or damaged when the damage exceeds twenty-five dollars. These investigations must be made within two days of the fire and the State Fire Marshal shall have the right to supervise and direct such investigation whenever he deems it expedient or necessary.



Germany Introduces a Fire Engine for the Use of Powder

A new type of fire apparatus has been built in Germany which uses a powder as an extinguishing medium. The powder extinguisher is used when water would spoil valuable stock such as silks, jewels and clothes. The powder is forced out with the aid of carbon dioxide gas and is sprayed on the fire.

Powers of State Fire Marshal

It must be noted that the State Fire Marshal has been given powers broader than those given to any other investigating officer in the state. The State Fire Marshal and his deputies are authorized to issue subpoenas, hold hearings and cause "the production of any book, paper or document deemed pertinent thereto by them or either of them."

The statutes provide that:

". . . All investigations held by or under the direction of said State Fire Marshal, or his subordinates, may, in his discretion, be private, and persons other than those required to be present by the provision of this act, may be excluded from the place where such investigation is held, and witnesses may be kept separate and apart from each other, and not allowed to communicate with each other until they have been examined."

Validity of Statutes Challenged

Records of facts and testimony that the Fire Marshal or his deputy make in these investigations are by express statute made state secrets which his deputy cannot disclose without the consent of the chief Fire Marshal; and no court in this state has the power to compel their disclosure.

The validity of these broad statutes has been challenged by able attorneys on constitutional grounds. Our court, in the case of Gilbertson vs. State, decided May 12, 1931, has, however, settled the matter. The Deputy Fire Marshal was ordered by the county court of Chippewa County in an action between an insurance company and the owner of the premises upon which a fire had occurred for the insurance on said property, that the Fire Marshal submit his notes that he had taken in the investigation of the fire and from which he had refreshed his memory at the request of one of the attorneys. The Deputy Fire Marshal refused to do so, for which he was adjudged in contempt of court, fined fifty dollars and sentenced to the county jail until the fine should be paid.

I was notified immediately and on petition made to the supreme court, a writ of error was asked to get the deputy out of jail and a stay of execution was granted. The deputy was discharged from prison pending the hearing of the matter in supreme court, and after a hearing the question was carefully briefed and argued by both sides and the court upheld the position of this Deputy Fire Marshal and reversed the orders of the county court. The book with notes and testimony used by the Deputy Fire Marshal in making notes in fire investigations could not be forced to be disclosed in any action by any circuit court. The court also held that no one could waive this right except the chief Fire Marshal. It was also stated that it was the duty of the courts to decline to permit the Deputy Fire Marshal to disclose results of fire investigations without waiver by the Fire Marshal. The result of this decision is that the notes and records kept by the Fire Marshal in the investigation of fire is a state secret which no court in this state has a right to require the Fire Marshal or any deputies to disclose without the consent of the Chief Fire Marshal.

Difficulty to Prove Guilt by Circumstantial Evidence

As arson is generally not committed in the presence of witnesses and as defendants are not willing to admit or confess their guilt, the crimes must generally be proven by circumstantial evidence. This is a difficult matter, especially if the facts and circumstances which are incriminating and by which the corpus delicti of the crime can be proven, have been permitted to be destroyed by the fire itself. Contrary to common belief circumstantial evidence is not always weak evidence. It may in some cases be very weak evidence but it may also be the strongest evidence that it is possible to produce in any case. Facts and circumstances may be so convincing that they absolutely demonstrate to a certainty the guilt of a defendant. A fact is a stubborn thing and cannot be overcome by a defendant if it clearly points to his guilt.

(*Continued on page 690*)

The Volunteer Fire Department

By N. N. WOLPERT,
Assistant Editor, FIRE ENGINEERING

A Series of Articles on Volunteer Fire Department Administration and Operation.

The Design of the Village Fire Station

This article, the ninth of a series, presents a number of valuable suggestions and pointers to be considered when designing a fire station for a volunteer Fire Department. Unlike the city building, the station for volunteer firemen must also serve as a clubhouse.

PURCHASING fire apparatus, even though it may be a complicated problem to some, is an elementary one when compared to the headaches that seem so much a part of the task of selecting a suitable design for the fire station or fire hall. The design of fire apparatus has been standardized so that much of the worries for the administrative body have been removed. A fire station, however, is far from standardized, and it is doubtful if it ever will be, because of the many personal ideas and suggestions that must be incorporated.

Primarily a fire station is a building erected to house fire apparatus and to protect it from the elements. In its simplest form it consists of a large family—style garage with folding or sliding doors in the front and a door at the rear so that the apparatus can be taken out to the yard in the back for adjustments or polishing. Where the shed is erected in places subject to freezing temperatures, some steps must be taken to prevent the water in the radiator from freezing or the engine from becoming too cold. Every car owner knows that a cold engine requires a long time to start. Every fireman knows that minutes saved in responding to a fire are the deciding factor in determining whether a building will be damaged or razed.

If the problem of fire station design was as simple as the construction of an enlarged family-type garage, there would be no need for writing this chapter. But the neighbors must be considered, the village planners have a word to say, the firemen want some place where they can meet and even the ladies auxiliary makes certain refinements necessary.

If you will but glance through your old souvenir journals or old department photographs you will realize that many changes have been made in fire station elevations.

The old style structure consisted of a two-story frame building. On the ground floor was space for the apparatus. On the second floor there was a recreation room furnished with one or more pool tables; then there was the council or meeting room, ornamented with photographs of the company taken at the time when the Smith Brothers dictated the style of chin ornaments. One room was generally dignified with the name of "Reading Room," but it was used for sundry functions. The large attic space under the gable roof became dead storage for broken pieces of furniture and old newspapers and magazines that were held for the junk dealer who never seemed to call.

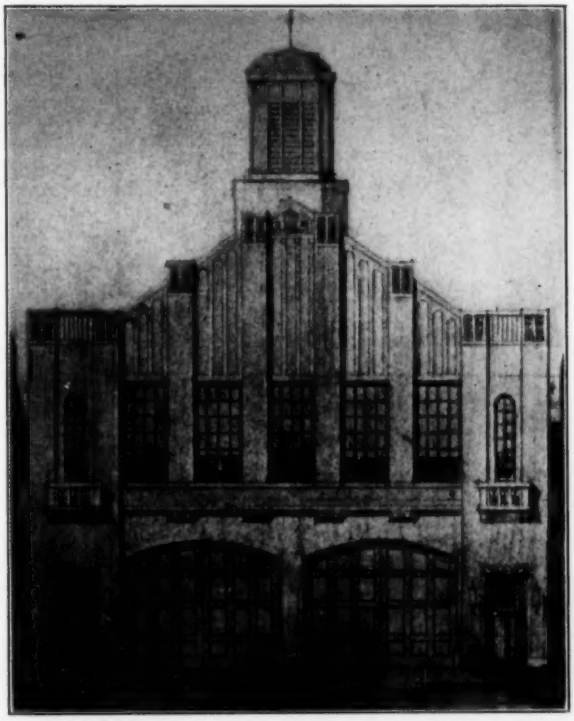
The Modern Station Must Be Attractive

But no modern community would ever attempt to construct the type of house described. Even though some of the more economical village fathers may still lean to the model building of their boyhood, it would be practically impossible to purchase land in an improved neighborhood, unless something more artistic were erected. The building must be made to fit in with the architectural scheme of the neighhood and become lost in it. Village or city planners no longer favor houses that stand out as something distinct from the community group like a thumb after it has been hit by a hammer.

A village may erect a central station or it may erect bungalow stations. Sometimes it is necessary to have both as in the case where a new development has been started miles away from the central point in the village.

The central or community station presents the most problems.

When designing buildings of this type, architects try to combine the building so that it may be used by other city departments. It is not uncommon to find a central station a part of a village hall with offices for village officials either above the apparatus floor or to one side of it; stations have also been combined with the police department and a jail



An Example of a Combined Village Hall and Fire Station

erected in the rear; and again, the fire station has served as the community center where village dances and parties or lectures may be held. However, a survey conducted by FIRE ENGINEERING recently indicates that the architects have been heading up the wrong alley.

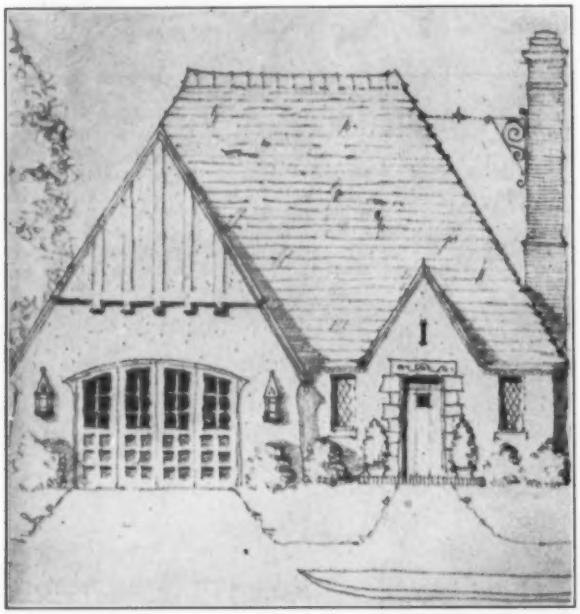
Firemen like to have a building all to themselves. Some of the volunteer Chiefs have presented the argument that if the house is also used for a community center it encourages loafers in the Fire Department part of the building. One chief has reported that the two stations of the community are used for other than Fire Department purposes, one for a branch library and the other for public functions, and neither arrangement has worked out well.

Many of the chiefs who reported, did not have experience with a combined police and fire station but did express an opinion concerning a combined community center and fire station. Nine chiefs were opposed to a combined police and fire station, six against the use of the house for village offices, thirteen against using part of the building for a community center, three favored a combined fire station and community center, one a combined police and fire station

and one approved the use of the building for housing the offices of local government.

In some communities, unless the school house is used, there is no space large enough for holding community dances, lectures, card parties or other neighborhood gatherings. And since many fire stations have a second floor that appears to be used only part of the time, the logical thing appears to permit civic groups to use the building.

Personally, I am in favor of erecting a fire house that will serve both as a community center and a fire station. In this way the village residents will be brought into closer contact with the Department, and if appropriations are desired for improvements, it will not be so difficult to win public approval. However, I do believe that there is sound logic to the argument that community gatherings will encourage the assembly of groups on the apparatus floor. To offset this, any doors that lead from the apparatus floor to the public part of the building should be closed for the night unless the closing of such doors will interfere with the normal and efficient operation of the department. The other plan is to have men detailed at these doors to prevent persons outside of the department from entering the apparatus or other department rooms.



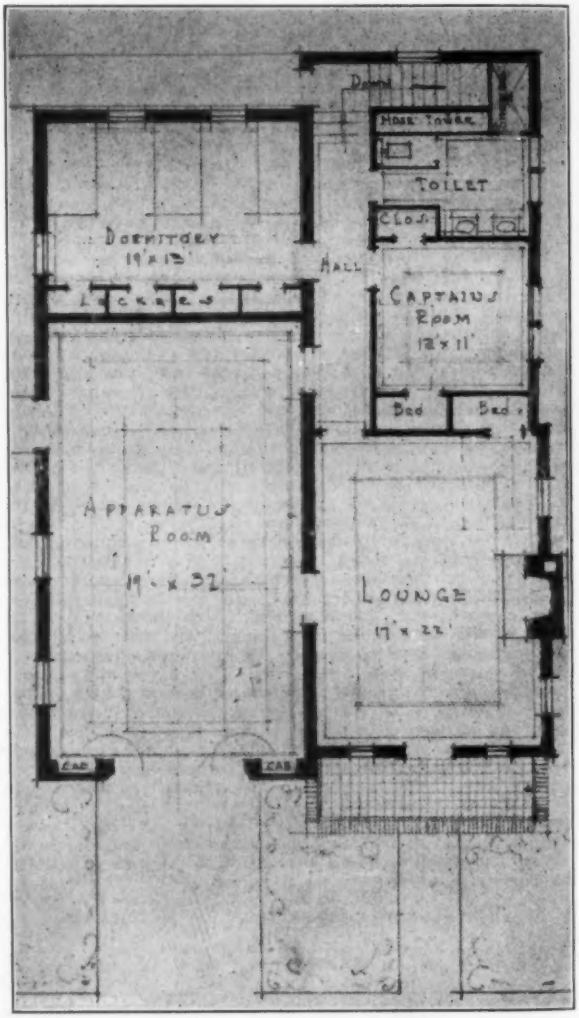
Front Elevation of Station in Anderson, Ind.

In planning a combined fire house and community center, a great deal will depend upon the size of the building and the number of pieces of apparatus that will be quartered there. From a general standpoint, the first floor should have a large apparatus floor, lavatory, hose drying room and a room for the fire alarm equipment. In the basement is placed the heating apparatus and a room for a department shop. Stations erected in climates where artificial heating in the winter time is not necessary, will not have need to dig out a cellar. It will be cheaper to add a room to the rear of the station if the officials consider it advisable to maintain a department repair shop. On the second floor there should be a large room for holding community parties, ladies' and men's rooms, a small room that may serve as a check room and also as a reading room, and a recreation room and a kitchen. The kitchen should lead directly off the large room so that the department may have facilities for holding dinners.

In designing a fire station, the greatest attention should be paid to the apparatus room for primarily the building is erected to protect the apparatus from the elements and to facilitate fire alarm response.

In southern climates, the apparatus door does not present a very great problem, but in the north where heavy snowfalls are common and sleet storms have been known to block egress from the station, the efficiency of the station hinges on the operation of the door. In the north it is mandatory that the doors operate other than outward. Snow packs up against the outside of the door, and if the door moves outward, it is necessary to move the large bulk of snow that has fallen over an appreciable area. For each succeeding inch that it is necessary to move the door, the process becomes more and more difficult for the snow packs and almost holds the door fast. Shoveling the snow away only serves to delay the fire alarm response. Doors should fold back and swing inward or else they should be raised up overhead. Some stations have full sliding doors, and while such an arrangement may be well for warmer climates, in sections where the winter is severe, wind has often blown hail and snow into the pocket provided for the door, so that ice holds the door fast.

Although the walls of many rooms in the fire house may be treated to give any particular effect desired, in the apparatus room, only a wall surface may be used that will permit of frequent washing and which will not serve as a trap for dust. Craftex walls, while they may be restful for the eyes, furnish many tiny pockets where carbon particles in the engine exhaust may lodge. Glazed tile can be cleaned with a damp cloth. If glazed tile is considered very expensive, then a flat plaster wall may be provided. Many artistic combinations may be developed on flat walls by a competent painter.



Floor Plan of Anderson, Ind., Station

If there are to be social or sleeping rooms on the street floor, then the apparatus floor should be one or two steps lower than the other rooms. In this way the heavy exhaust fumes from the motor of the apparatus will be trapped. The heavy fumes will hover close to the floor, and unless sufficient fumes are generated to cover the complete floor for a

(*Continued on page* 694)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

SMALL municipalities depend for their fire alarm system upon sirens or whistles, either coding or otherwise. These audible signals are designed to be heard in every part of the community, so that the volunteer firemen may know that their services are needed at a fire.

However, fire alarms occur at very infrequent intervals, and to the best interests of the town, they should not occur at all.

But tests must be made so that the department will have some kind of assurance that the fire alarm system is in good condition. This is done by having a test blast either at noon or some time early in the evening, so that the signals will not be confused with the bona fide alarm.

The question in full that is treated in this issue appears in the box on this page. In the box on the following page is the problem that will be discussed in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE PROBLEM

Do you have test calls on your siren each day, and when is the test blast given?

Has confusion resulted from blasts blown on your siren and those in the neighboring villages?

If so, how have you remedied the situation?

What has been the farthest your signals have carried?

Discussion of the Question

Most of the places where audible fire alarm systems have been installed use a daily fire alarm test signal. It is interesting to note the range that has been reported for the siren or whistle signals. The letters received follow:

R. J. Benham, Chief, Washington, Conn.: We test the siren at 12 o'clock noon, daily, except Sundays.

We have no neighboring villages near enough to us so that their sirens can be heard.

We have one instance on record that our siren was heard nine miles away (of course I realize this is very unusual, and would not believe it but we have ample proof of the fact). Ordinarily the distance that the siren can be heard depends entirely upon the wind and atmospheric conditions, sometimes it can be heard three or four miles in one direction and not even one mile in the other.

J. W. Randlette, Chief, Richmond, Me.: We blow a test call on our fire alarm siren at 7:30 p. m. (two blows). That hour was selected so that we might be reasonably sure that the alarm system was in working order in the night time.

We have had no confusion, because the nearest Fire Department is twelve miles distant.

The siren which we are using is located on the roof of a four-story manufacturing plant and has a 440-volt 3-phase 60-cycle motor with a single end horn. We have had reports of this being heard six miles away.

Albert Anderson, Chief, Cos Cob, Conn.: In our department we use a Diaphone Horn instead of a siren. One blast is sounded every night at 7 o'clock for our test blast.

We have experienced confusion from a blast blown on our horn and the one on the neighboring fire house. To remedy the situation we changed the tone of our horn and also the position.

It has been recorded that the blast has been heard some ten miles away; of course, weather conditions govern this entirely.

Henry J. Lecocq, Chief, Marshfield, Ore.: We make a test call on both the house siren and the siren at the mill. The house siren is connected with the telephone company central and is used for all first alarms. This siren is a Federal Street Siren and has proven to be a very efficient piece of equipment. It has a radius of about five to eight blocks and can be controlled by either the man on shift or central. The siren at the mill is a steam siren and is used for all major fire alarms. Our adjoining city has a Diaphone and we never confuse the two alarms. Test calls are made on both sirens during our weekly drills.

The steam siren at the mill has been heard for more than ten miles during favorable wind conditions. The average radius, however, is from three to five miles.

Thomas A. Kellum, Chief, Claymont, Del.: We do not at present have tests blown on our siren. When the siren was first installed we tested each night at 6 o'clock but we have discontinued the practice on account of confusion.

We are located on one of the main arteries of automobile travel and when the siren is blown all traffic must come to a stop so as to avoid unnecessary blocking of traffic. We do not use the siren except when necessary.

The nearest siren is not closer than four miles and we can very easily distinguish ours from the others.

The farthest that I have known our signals to be heard has been from three to four miles.

James M. Fletcher, Jr., Chief, Roseburg, Ore.: Our siren is only blown for fires, not for test purposes. We generally ascertain the nature of the fire from the person calling us, and if it is a chimney fire, grass fire or one of no consequence, we do not blow the siren. Neither do we blow the sirens on the trucks when responding to this kind of a call except when we wish to pass a vehicle. I believe we get along better this way, as we do not get everyone excited and there is not a bunch of cars following us. Under these circumstances when the volunteer firemen hear the siren they can feel assured there is a fire, and as each fireman has a colored light on his switchboard plug at central, the girls answer these calls first and the firemen are able to learn the location of the fire just as quick as they can reach their telephone. The only time the siren is blown for any reason other than for a fire, is to announce some special news, and then a special signal is blown and wide publicity given beforehand. This has happened only twice in ten years. We have a volunteer Fire Department except for two paid men. We have two large gongs, one in the sleeping quarters and one on the outside of the fire station. When a fire alarm comes in these gongs, which can be heard for two or three blocks, summon several firemen who are located in that territory, thereby giving us a small crew.

There are no other sirens located closer than eighteen miles, so we are not bothered by confused signals.

We have a three-horsepower double head Sterling siren mounted on top of the fire station tower, about seventy-five feet high. This siren is heard quite often ten miles from the city.

Harold E. Jopson, Chief, Deep River, Conn.: We have a test call blown every day, except Sunday, at 12:30 noon.

No confusion has ever resulted, as we have a Gamewell diaphone system and the neighboring towns have sirens.

We have known of alarms being heard and correctly counted five miles along the river, but three miles is the average distance alarms are heard.

A. C. Lovern, Chief, Vinton, Va.: We have test calls on our siren each day at 12:00 o'clock noon.

We have had no confusion resulting from blasts blown on our siren and that of neighboring villages. Our signals have carried from three to six miles, depending on weather conditions.

Gregory Lenz, Chief, Little Chute, Wis.: Our siren is tested every day at 5 p. m., with just a very short blast so that we may know it is working.

We have had no confusion from blasts blown by our neighboring villages, which are 1 mile and 1½ miles away. Our signals have carried four miles on clear days.

H. T. Danner, Chief, Beaufort, S. C.: Our siren, a five horse power Sterling siren, is equipped for coding. It is blown manually every day at noon. We do not use any signal, but blow one eight-second blast.

There are no nearby villages, consequently there is no confusion. The nearest electric siren is forty-five miles away.

Our siren has been heard under favorable conditions at Frogmore, a Post Office several miles from Beaufort. Under ordinary conditions our signals carry about two miles.

Harry R. Page, Chief, East Haven, Conn.: We test calls on our siren daily at 7 p. m. That is when the night shift comes on.

We have had no confusion due to the fact that there is no other whistle in this district with the same tone. We have the Loper system.

The siren is usually heard about two miles away, but under certain weather conditions it has carried sound five miles distant.

Charles C. Keith, Chief, Belwood, Pa.: We have one test call each week. This is on Thursday evening at 7:00 p. m.

Confusion has not resulted from blasts blown from neighboring villages. Our signals have carried about four miles at times and ½ mile at other times, depending on the wind and weather conditions.

Earl Hoffman, Chief, Aurora, Ind.: At the present time we do not have a siren, but use the old type alarm bell located on the roof of headquarters.

However, this method is quite obsolete and eventually we will install a siren if one can be secured in a size large enough for our needs.

E. P. Barrington, Chief, Waupaca, Wis.: We have test calls on our siren each Monday at 7:00 p. m.

We blow just one blast, but if there happens to be a fire alarm at the same time, we blow two or more, so that the boys will respond.

We have no close neighboring towns with sirens to confuse us. Our siren has been heard 3½ miles away with favorable weather conditions.

G. M. McOmber, Chief, Sparta, Wis.: We have used our siren in winter once a day for test call, but due to the fact that we are located within one-half block of the hospital it was necessary to do away with this test because it disturbed the sick people. I believe, however, that it is a very good plan, if it is possible, to test sirens daily. The blast from our sirens has been heard from six to fifteen miles away.

H. D. Housman, 1st Asst. Chief, Jamesburg, N. J.: We have a test call on our siren each day at 12 noon.

We never have had any confusion with our neighboring communities, as the nearest town has a steam whistle and the sound is very different.

Our signals have been, to the best of my knowledge, heard approximately four miles. It has been heard further, however, depending entirely upon weather conditions.

John J. Bower, Chief, Bellefonte, Pa.: We test our siren at noon each Saturday. Twice in three years we have had a slight delay by an alarm at that time being mistaken for a test. No adjoining towns have sirens. Our local plant has a small siren, but no confusion has ever resulted.

Our siren can be heard from two to three miles under favorable wind conditions. We use a 5 horse power siren, but believe the effective radius under all conditions is not over one mile.

We have tried several code sirens, but none proved successful. We use our present siren only for general alarms sounded from the telephone exchange.

Shirley Ridgley, Chief, No. Manchester, Ind: We make tests at 12 noon daily. However, the best time for a test is on a clear, warm day. Blasts have been heard seven miles north, six miles east, 4½ miles south and five miles west. We have no confusion caused by the testing of our siren.

C. J. Carrigan, Chief, Terryville, Conn.: We have a whistle alarm, using the code system. There is a private phone wire to the engine room of the factory, so we do not have any test blast. Our signals have been heard as far as eight miles away.

George Kuehlthau, Chief, West Bend, Wis.: We have no siren. Our alarms are telephoned to the Wisconsin Public Utility Company power station, where they have steam up all the time with men on duty 24 hours a day. As soon as they receive the alarm they pull a steam siren whistle which we have installed in the station.

This whistle is used only for fire alarms, and is only blown in case of fire. A long blast is for the fire with short ones to indicate the district the fire is in. We have four districts.

The whistle has been heard as far as eight miles when the wind was favorable and the weather clear.

Our city is about one mile each way and the alarm is heard in all parts of it.

E. E. York, Chief, Winthrop, Me.: We have a Gamewell machine attached to a steam whistle through a balance valve. It is tested daily at 8 p. m. It has been heard as far as nine miles distant.

Harry E. Smith, Chief, Harrison, Me.: The siren is tested at 12 noon each day. There are no sirens used near enough to bother ours.

The greatest distance the signals have carried is about four miles. It usually can be heard about two miles.

O. E. Payne, Chief, Dixfield, Me.: Our siren is sounded at 9 o'clock p. m. and is used as a curfew.

There is no siren nearer than five miles, and we are therefore not troubled with confusing our siren with any other. Our siren has been heard about three miles. It is not as powerful as we expected it to be.

H. W. Breder, Chief, Egg Harbor City, N. J.: We have test calls every day except Sundays at 12:30 p. m. According to the direction of the wind, we can hear the blasts from three towns around us, one three miles, one five miles and one seven miles away. We have overcome confusion by placing three sirens in different sections of our town which give us a shrill sound and are easily distinguished from the others. Our signals have been heard for eight miles. Of course, this depends largely on the wind.

R. L. Robinson, Chief, Woodruff, S. Car.: We do not have test blasts on our siren, for our department is all volunteer, and it might cause some confusion regarding the alarm going in. The test plan has been considered several times, but has never met the approval of the Council, or of the entire department. We haven't any town nearer than twelve miles, so if we should have a test blast we would have no trouble caused by confusing blasts with neighboring sirens. One of our firemen, who was five miles from Woodruff, heard the alarm, which is the greatest distance that our siren has ever heard heard.

C. Conn Scott, Chief, Shelbyville, Del.: We do not have test calls on our siren each day, but I believe, however, this should be done to insure the safety of our town and community. I believe the blast should be made at 12:00 noon.

(*Continued on page 693*)

THANK YOU!

Due to the very large response to this discussion, it has been necessary to divide it into two installments, and to continue it in the following issue.

With the Editor

Shooting Out a Fire

Here's a new one in fire extinguishment! It was brought to our attention by Chief John W. O'Hearn, Secretary of the New England Association of Fire Chiefs and head of the Watertown, Mass., Fire Department. The account came to the Chief from a former school teacher, who witnessed the remarkable event, and knowing he would be interested, passed the story on to him.

It seems that the town of South Penobscot, Me., was visited by a thunder shower, and during the storm, a bolt descended upon the tall steeple of the Baptist Church, setting the wooden ball which surmounted it afire. The Fire Department was helpless, as it had no means of fighting a blaze so high in the air. Sparks from the burning ball were descending upon the steeple and the church, threatening the destruction of the building.

Then one of the men had an inspiration. Why not shoot out the fire? The idea was no sooner communicated to the other members of the department than they and any other citizens who possessed fire arms, dashed off and returned in a jiffy, armed with rifles and shotguns. Fortunately there is no "Sullivan Law" in Maine, and equally fortunately, most of the men were crack shots. The blazing ball in less than no time was reduced to splinters and the church was saved!

This is only another instance which shows that the members of the Fire Department are always wide awake and ready to meet any emergency that arises, no matter what it may be.

Keeping Pension Funds Separate

A large city in the eastern part of the United States is facing a most serious situation, as far as the pension funds for its employees are concerned. This city, at the close of its fiscal year showed a total in its pension fund account of less than $120,000 partly in cash and partly in city bonds. Against this there was set an actual liability of considerably over $2,500,000 in deposits of employees of the city which are withdrawable at their option upon leaving the service. This, besides, does not take into account the accrued liability arising from the claims of future employees of the city.

An angle of this condition that is of particular interest to the readers of FIRE ENGINEERING is the fact that in this instance the members of the Fire Department are classified with the other employees of the city in question and receive their pensions along with the others from this fund. No one, it is said, knows exactly what the liability of this city for pensions may be, as no actuarial study has been made of the situation, but it is certain to amount to well into the millions of dollars. It will, of necessity, require heavy additional appropriations from the city treasury to cover the mounting deficit.

All of this is a very strong argument for the Fire Department pension system to be administered by its own officers and kept separate from those of other city employees. In cities in which this is done, there is no complaint as to the administration of the fund. It is replenished from a percentage taken from the salaries of the men, plus, in some instances, an appropriation from the Fire Department funds or the tax on insurance companies, or both. The arrangements are entirely in the hands of the Fire Department and it is responsible for the efficient administration of the fund. The Chief and his men see to it that the pension fund is kept on a strict actuarial basis and that the liabilities are properly balanced by the funds in hand in all cases. It stands to reason that where all of the employees of a city are embraced in such a fund, this arrangement would be impossible of realization.

Towns Endangered by Forest Fires

Naturally the severe loss of timber destroyed in the recent heavy forest fires occurring in the forested portions of the state of Idaho last month is deplored by all who realize the length of time it requires to replenish these denuded forest areas. Vast tracts of land have been burned over in these latest fires which it will take generations to restore to anything like their former condition of luxuriant forest growth. In the mean time, the watersheds supplying streams are denuded of their coverage, and threaten to dry up from exposure to the rays of the sun and thus reduce the already restricted water supply of towns relying upon the springs and streams arising in these wooded regions.

But in this latest visitation in Idaho the Fire Demon struck even nearer home to the fire-fighting profession. Three mining towns were directly in the path of the flames and were threatened with annihilation for a time. These settlements, Pioneerville, Gold Age and Grimes Pass, were so near to destruction by the flames that the inhabitants removed their belongings—or all that they could—to open sand flats outside of the cities, and then spent their time in assisting the fire fighters in battling the flames.

The men on the battle line, in the mean time, had resorted to backfiring and trenching and had cleared a space a mile wide around the towns, and the fires, almost at the door steps of the houses, finally burned themselves out, and the towns were saved. In the pre-

vious week two other small mining communities had been wiped out, bringing to mind most forcibly that the forest fire may mean the destruction of communities as well as the virgin forest land surrounding them.

The extreme dryness of the forests arising from the lack of rain and the shortage of water from this same cause, make the fighting of these forest fires a doubly difficult task and in spite of over five hundred men fighting them, they at times passed completely out of bounds and threatened the complete destruction of the forests and any towns that might be in their paths.

More strict regulations as to fires in these dry areas and severer punishment of offenders of such regulations would seem to be in order and also some such system of air patrol as has been adopted in the national forest preserves of the far West, so that incipient fires can be detected and extinguished before becoming conflagrations.

N. J. Chiefs to Hold Annual Meeting

The annual meeting of the New Jersey State Fire Chiefs' Association will be held at Atlantic City, N. J., Friday September 18 in the Vernon Room of the Haddon Hall Hotel. The meeting will be called at 8 p.m. At this meeting will be presented the annual reports of officers and standing committees. There will also be the election of officers.

Florida Association Has Six Districts

The Florida State Fireman's Association, for purposes of its administration, has divided the state into six districts, each under the jurisdiction of a District Vice-President. Those elected at its last convention were as follows:

First District—Chief R. L. Stevens, Leesburg, Fla.
Second District—A. J. Chambers, Ocala, Fla.
Third District—Chief Steve Edwards, Quincy, Fla.
Fourth District—Chief E. C. Henshaw, New Symrna, Fla.
Fifth District—Chief J. F. McMillian, Cocoa, Fla.
Sixth District—Earl J. Langley, Ft. Myers, Fla.

The other officers of the association are as follows:

President, Chief W. R. Anderson, Ft. Myers, Florida.
Vice President, Chief Paul D. Joyce, Haines City, Florida.
Secretary, Chief F. C. Pfaender, Winter Haven, Florida.
Treasurer, Chief B. B. Hart, Daytona Beach, Florida.
Statistician, Ass't Chief J. B. Chancey, Jacksonville, Florida.

Fire Losses in West Virginia Decrease—There has been a decrease of $106,280 or nineteen per cent in the fire losses for West Virginia, according to a report issued by C. O. Stahlmann, State Fire Marshal.

Spencer, Ia., Host to Firemen—A banquet was arranged by the Fire Department of Spencer, Ia., and the Spencer Commercial Club for the firemen of neighboring departments who responded to the call for help on June 27 when part of the business section was destroyed. The firemen were the guest of the New Spencer Theatre, the first of the buildings to be rebuilt.

Wheat Farmers Band for Protection of Property

Because of the large number of fires that have been creating havoc among the wheat farmers near Dayton, Wash., the farmers have banded together and have formed the Northwestern Mutual Fire Association. They financed the purchase of apparatus shown in the illustration. The photograph was taken when the volunteer firemen were fighting a wheat fire that razed 400 acres in about forty-five minutes.

Liability Act Passes in Ohio

Governor Emmerson, of Ohio, has signed a bill which defines the relation of liability for injuries caused by the negligent operation of Fire Department vehicles. The section of the law that has been approved follows:

Section 1. In case any injury to the person or property of another is caused by the negligent operation of a motor vehicle by a member of a municipal Fire Department while such member is engaged in the performance of his duties as fireman, and without the contributory negligence of such injured person or the owner of such property, or the agent or servant of such injured person or owner, the municipality in whose behalf such member of such Fire Department is performing such duties shall be liable for such injury; provided that in no case shall a member of a municipal Fire Department be liable in damages for any injury to the person or property of another caused by him while operating a motor vehicle while engaged in the performance of his duties as fireman.

New Chief for Albuquerque, N. M.

W. A. Westerfeld has been appointed Chief of the Fire Department in Albuquerque, N. M., to fill the vacancy caused by the death of Fred Russell.

Chief Westerfeld has been a member of the Fire Department since 1919 or longer than any other man in the service. On January 1, 1931 he was appointed Assistant Chief. He has been given power to name his own assistant and to reorganize the entire department.

Fire Company is Cosmopolitan Group

A volunteer Fire Department is often the greatest common denominator that a community may have. For example, a survey was made of the occupations of the ten members of the volunteer Fire Department in Williamsport, Ohio.

The Chief of the department is a funeral director, the Assistant Chief is a banker, and among the others, there are a publisher, druggist, school teacher, farmer, automobile mechanic, grocer, realtor and His Honor, the Mayor.

The community fire station is maintained by the village but is leased to the trustees of Deercreek Township and to approximately fifty persons living within a radius of six or seven miles of the village. There is no fire alarm system and the firemen depend upon the telephone operators to spread a fire alarm to the members of the department.

Bowler Resigns as Chief of Buckley, Wash.—Roy Bowler resigned as Chief of Buckley, Wash.

Fire House Opened in Pt. Washington, N. Y.—A new fire station has been formally opened in Port Washington, L. I., N. Y. A dinner was served by the Ladies Auxiliary to the guests who attended.

Fire House Opened in Puyallup, Wash.—A new fire station has been opened in Puyallup, Wash. The apparatus room has space for two pieces of apparatus. There is a concrete covered court in the rear where apparatus may be taken for washing. The overall building measurements are fifty-two by sixty-five feet.

THE COVER ILLUSTRATION

A parade of firemen and fire apparatus is always an inspiring and interesting sight, and besides this, contains elements of an educational value for the citizens of the city or town in which the celebration is held. This is especially true when the old and the new types of fire engines are in line, contrasting the former and present methods and emphasizing the great strides that have been made in fire fighting.

The illustration on the cover of this issue of FIRE ENGINEERING shows such a parade on a huge scale. The Ninth Annual National Firemen's parade is shown passing down historic Pennsylvania Avenue, in the National Capital on Labor Day, September 7. Fire Departments and Companies from nine states took part and there were more than 25,000 firemen in line. There were a number of colorful floats in the procession, and also examples of ancient types of fire-fighting apparatus. This parade has become one of the institutions of Washington, and takes place each year on Labor Day.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Steam in Standpipe

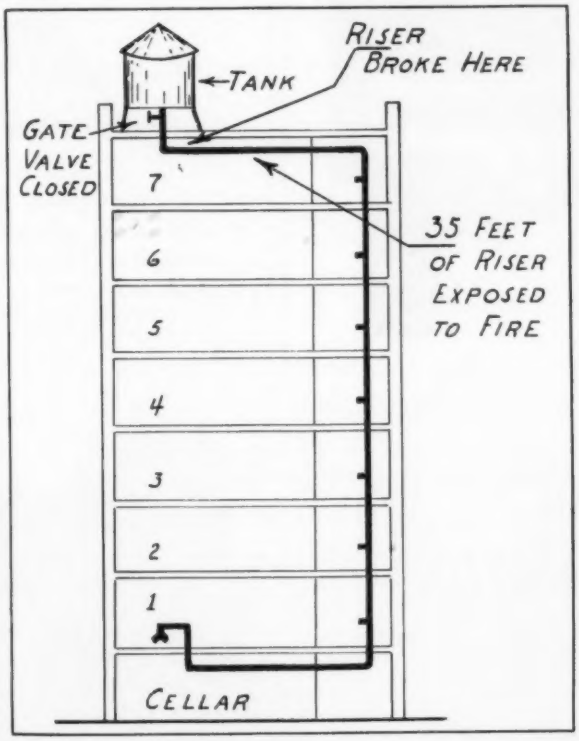
To the Editor:

Herewith is a layout of a wet standpipe system in a building. This building has a 40 foot front. As you will note, the riser runs up through the stair hall, and on the top floor runs along the ceiling for about 35 feet where it is connected to the tank.

A fire occurred on the top floor of this building and upon the arrival of the department the entire top floor was involved, fire blowing out front and rear windows.

First due company connected to siamese and started water, hose was stretched from the 6th floor to the 7th floor; gate valve was opened. The man opened the controlling nozzle and in place of water issuing from the nozzle steam under great pressure was discharged.

It was discovered after the fire was extinguished that the gate valve under the tank was closed and that the



riser on the top floor was disconnected where it set into the bottom of the tank.

Will you please advise me, through your Questions and Answers Department, the reason for this, assuming that at the start of this fire the standpipe had been fully filled with water? L. H. J.

Answer: It is likely that the riser burst just beneath the tank about the time the nozzle of the line attached to the standpipe was opened. Otherwise, there would have been little or no steam pressure in the standpipe to force the steam through the hose line. It is possible, however, that the break in the riser was so small as to still permit pressure to build up in the standpipe, but in this case steam would be issuing from the crack in the riser at the time the department got the line in operation.

It is very likely that the water was trapped in the standpipe system by the check valve at the street entrance below and by the valve beneath the tank, which you state was closed. In this case, the heat of the fire on the top floor would change the water in the standpipe into steam on this floor and build up tremendous pressure. Doubtless the pressure generated by the vaporization of the imprisoned water burst the riser.

It is possible to heat water, locked in a pipe line, to such a temperature that upon issuing the water will immediately be converted into steam, but the pressure generated in the pipe line upon so heating would be tremendous. The fact that the riser was broken shows that such pressure was not produced and, therefore, it is assumed that the standpipe was not entirely full. This would be possible in view of the fact that the valve beneath the tank was closed and the water permitted to stand in the standpipe for some time, possibly a little of it leaking out at some time or other.

A Short Method for Finding Engine Pressure

To the Editor:

I have been following the articles in FIRE ENGINEERING regularly, especially the *Questions and Answers.* I have noticed a great deal of information regarding hydraulics for firemen. I have a system I worked out which I believe would interest every fireman.

We all know what a pump man needs when he is at a fire is a system that can be worked without the aid of pencil and paper and the slow progress of getting the flow in gallons; then the friction loss or the system using the formula—P.P. = N.P. x (1.1 + KL), is out of question at a fire.

I have a more practical way because of its simplicity which enables you to get the pump pressure without pencil and paper. In practical work the pump pressure is what you want. When you arrive at a fire you know from experience what size nozzle to use and the correct pressure and a look at the hose wagon will tell you how much hose is in use, or you can count the sections.

The table below will give you the pump pressure and it is close enough for all practical use.

Table for 2½-Inch Hose

Size Nozzle		
1 inch	—Take 1/5 of nozzle pressure*	+ N.P. = Pump Pressure
1⅛ inch	—Take 1/3 of nozzle pressure*	
1¼ inch	—Take 1/2 of nozzle pressure*	
1⅜ inch	—Take 3/4 of nozzle pressure*	
1½ inch	—Take 1 time of nozzle pressure*	
1⅝ inch	—Take 1½ times of nozzle pressure*	
1¾ inch	—Take 2 times of nozzle pressure*	
2 inch	—Take 3 times of nozzle pressure*	

* which gives friction loss per 100 ft.

The above table gives the friction loss per 100 feet of 2½-inch hose and, of course, you add the nozzle pressure to get the pump pressure. For example: Say you have 1¼-inch nozzle and 700 feet of hose and want 50 pounds on the nozzle. Look at the table and the factor for 1¼-inch nozzle is ½ of the nozzle pressure. Therefore, take ½ of 50 which gives you 25. This is the friction loss for 100 feet of hose. Then 7 x 25 = 175, which is the friction loss for the 700 feet of hose.

175 + 50 = 225 which is the pump pressure. With a little practice such problems can be worked out without pencil and paper.

Another example with 1¼ inch nozzle:

Take 60 pounds on the nozzle, 500 feet of hose.

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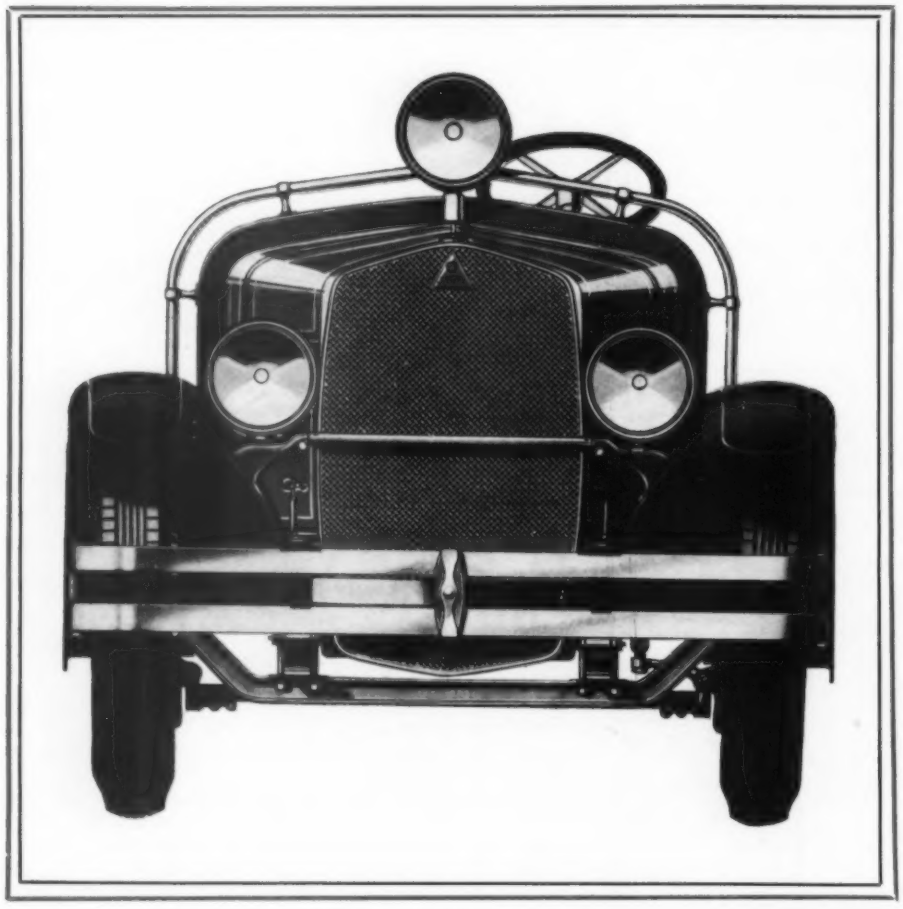

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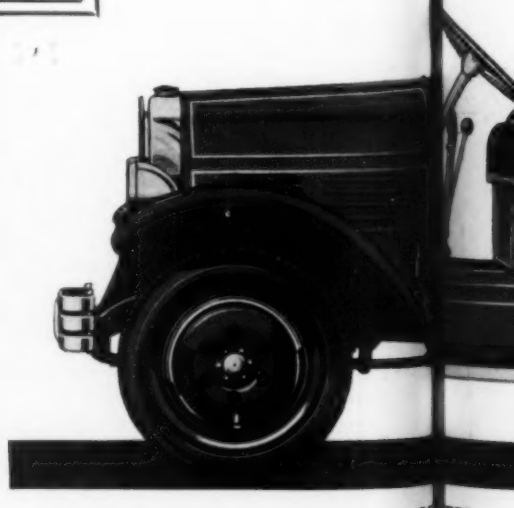

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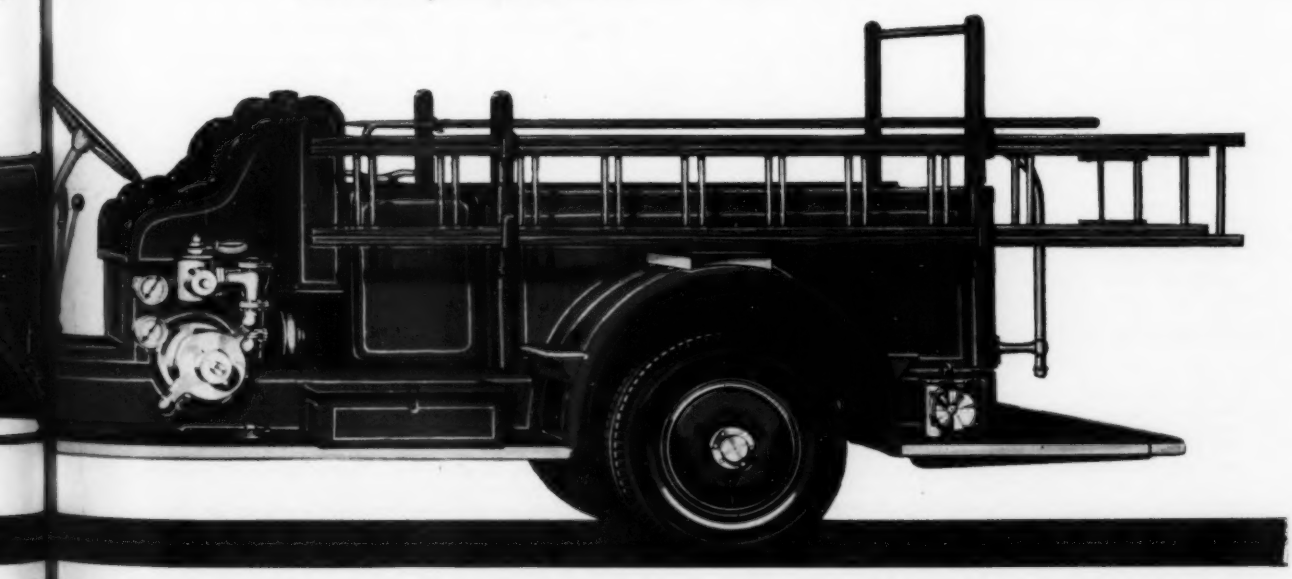

OR BY
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½ of 60 is 30 which is the friction loss for 100 feet.
30 x 5 = 150, total friction loss and nozzle pressure.
150 + 60 = 210, which is the pump pressure.

It is necessary to memorize the factor for each nozzle in order to find the friction loss, but it is easier to remember than "K" for a nozzle.

Example with 1⅛ inch nozzle, 700 feet of hose. Say you want 45 pounds at the nozzle. Look at table. 1/3 of N.P. is friction loss. 1/3 of 45 is 45 ÷ 3 which equals 15. This is the friction loss per 100 feet. 5 x 15 = 75, total friction loss. 75 + nozzle pressure of 45 equals 120, which is the pump pressure.

With 1½ inch nozzle: Looking at the table you find the factor for 1½ inch nozzle is 1, or it is the same as the nozzle pressure, per 100 foot. The factor remains the same for a given nozzle, but the friction loss varies according to the nozzle pressure. Therefore assume a nozzle pressure of 60 pounds and 400 feet of hose: 60 x 1 = 60; 60 x 4 = 240 + 60 lbs. nozzle pressure = 300 pounds pump pressure.

Thus when you find the friction loss for the kind of hose or number of lines per 100 ft. you can multiply by the number of 100 ft. and add the nozzle pressure as in the single lines.

This will enable the man at the pump to give a close and safe pump pressure. If the pump is equipped with a pressure gauge on each outlet, just outside the shut-off valve, the pump man can send a line to the front of the building and one to the alley, and give the correct pressure on each line.

LIEUT. J. E. TRAVIS,
No. 2 Fire Station, Wichita, Kan.

The Law on Arson

(*Continued from page 680*)

In order to appreciate the difficulties which beset the investigating officer in detecting the crime of arson, and the prosecuting officer in securing a conviction, it is necessary to consider the manner in which this crime is committed. This crime is not committed in the heat of passion on the spur of the moment, it is deliberately planned and carefully carried out. Secretly it is perpetrated so as to leave few, if any clues. As a rule the culprit has approached the building on a dark or stormy night and with a match fired an inflammable part of the building. The problem is very difficult where the criminal has foreseen that suspicion might fall on himself for some reason such as enmity or jealousy, and therefore has taken the precaution to prepare an alibi in advance. The same is true where one overwhelmed with debts fires his building to secure the insurance. In these various cases the guilty person will do all he can to establish that he was not present but far away, so that he could not be guilty of the offense. To accomplish this he starts the fire by one of the various devices known as fire traps which cause the fire when he is absent. For this purpose, he employs means, some of which are simple and others very ingenious.

Facts and Circumstances Sometimes Give Story of Crime

The facts and circumstances surrounding every incendiary fire sometimes give very definitely the story of the crime. It is of the utmost importance that they be discovered before the fire has obliterated them. The firemen are generally the first on the scene of the fire. The intelligent firemen will perform a great public service if he will observe the facts which tell the story of the criminal origin of the crime. This is one of the duties he owes to his community. If an arson case fails in the conviction of the guilty party simply because someone has not seen what he could and should have seen, that someone has failed in his duty to the public.

Too often the fire consumes the corpus delicta of the crime but with the efficiency of the Fire Departments the fire is often extinguished and the evidence of the incendiary origin of the fire may be discovered by the intelligent firemen. It is very necessary that the remains of all fire traps be carefully guarded and preserved. All finger prints, if any are found, and tracks or foot prints that may be those of the incendiary, should carefully be preserved. Remember that the guilty party will generally be diligent in obliterating all clues that may point to his guilt. If he is an intelligent person, he will know what these clues are. For that reason the utmost care should be used to prevent the destruction of the clues.

What the State Must Prove

In every arson case the state must prove not only that the building was burned, but also that the burning was by wilful act of some person, criminally responsible, and not as a result of natural or accidental causes. There is a presumption in law that a fire was caused from natural or accidental causes which must be overcome by competent evidence. The burning of the building is usually established by direct evidence, though it need not be. When the facts of the burning are established, then it is necessary to show how the act is done and by whom. This may be shown by the introduction of any legal or sufficient evidence that the act was committeed by the accused and that it was done with criminal intent, even though the evidence be circumstantial in its nature.

When the investigator has in his possession facts and circumstances which point to the real culprit in the case, it is often possible for him to secure a confession because the accused believes that he may secure leniency from the court by aiding the prosecution and saving expenses to the county. Extra-judicial confession by one accused of a crime is admissible in evidence against him, if voluntarily made and properly corroborated by the facts and circumstances in the case.

Conspiracy Must Be Proved Before Legally Ended

When persons have banded themselves together to accomplish some crime, every word or act of each conspirator, in furtherance of the accomplishment of the crime, binds every other conspirator so long as the conspiracy has not yet been ended; but if the conspiracy has ended the admissions of a conspirator is no longer admissible in evidence. So in an arson case where persons conspired to burn a building with the intent to defraud an insurance company, until the insurance is paid, the conspiracy is not ended. So, when one of the conspirators is to be paid for his part in the crime and he has not yet received fully the amount agreed to be paid him, the conspiracy is not yet ended and the confession of one will bind the other. The Wisconsin court has held in an early case, Ogden vs. State, 12 Wis. 532, that a person is charged with being an accessory before the fact to the crime, the confession of the principal felon as to his guilt is not admissible as evidence against the accessory, it being as to him hearsay evidence only.

Admissible and Inadmissible Evidence

In proving that the burning was of incendiary origin and not accidental, evidence is admissible that fire broke out in different parts of the same building at about the same time or that previous attempts to burn it have been made. Evidence that the defendant was near the place of the fire shortly before it occurred may, together with threats, admissions of the defendant and removal of most of the content of the building burned, be introduced in evidence. Evidence of foot prints near the burning building and their correspondence with the accused foot prints is admissible with other proof, although it may not in most cases of itself be sufficient to convict.

To prove the malicious intent, evidence is admissible that the accused bore the owner of the building or habitation illwill. It is also proper to show the malice of the defendant by his own acts and declarations as a link in the chain identifying him as the guilty party. The malicious intent, however, need not be specifically proven but may be presumed from the wilfulness of the act of burning. Absence of motive does not disprove the defendant's guilt, but evidence of motive in connection with other facts and circumstances is often very convincing to a jury.

The accused may show by any legal evidence that another committed the crime with which he is charged, but this cannot, according to most authorities, be shown by the admissions or confessions of a third person not under oath, which are usually considered as hearsay. This kind of evidence draws the jury's mind away from the point at issue, which is the guilt or innocence of the prisoner, and excites and prejudices and may mislead them. But where there is other evidence that someone else committed the offense, who has made threats, evidence of such threats is admissible as part of the facts and circumstances which indicates that the person making them is the guilty person rather than the accused.

There is a rule applicable in criminal prosecutions generally which renders inadmissible evidence of any offense other than that for which prosecution is had; but there is an exception to this rule and one of them is that when it is material to show the intent with which the act charged was committed, to illustrate its criminality, or to identify the accused as the person who committed the act, such evidence is admissible. It is inadmissible to prove by one who saw the house while it was burning that in his opinion the house had been set on fire by someone. The same principle renders inadmissible of opinion evidence that a fire was communicated from one building to another. While a witness may testify to the peculiarities of the foot of the accused and how these peculiarities were re-produced in a certain foot-track, he cannot give his opinion that such track was made by the accused. It is for the jury to draw the conclusions and for the prosecution to prove the facts from which they may draw the conclusions.

As to the Uncorroborated Testimony of an Accomplice

The question sometimes arises whether an accused can be convicted upon the uncorroborated testimony of an accomplice. In Wisconsin the supreme court has held that this may be done, but the court also said the jury should not do so. As such evidence is sometimes unreliable and subject to grave suspicion, it should be acted on with the utmost caution, and the court may in its discretion advise the jury not to convict. The rule seems to be settled that where corroborated by circumstantial evidence the testimony of an accomplice is sufficient to authorize the conviction of a defendant of arson. Experiments made by officers for the purpose of establishing a theory as to the cause of the fire are sometimes valuable, and the results of such experiments may in some cases be testified to; but a proper foundation must be laid for the introduction of the evidence by proof that the instrument experimented with was used in setting the fire.

(Excerpts from a paper read before the Third Annual Wisconsin Short Course in Firemanship.)

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending September 4	Loss in Thousands of Dollars
ALLEGAN, MICH.—Eight bldgs. on Fred Banks dairy farm	25
BALTIMORE, MD.—Methodist Church, Washington St.	80
BRINKLEY, ARK.—Plant of St. Louis Coöperage Co	80
ROUSEVILLE, PA.—Several business establishments	50
BROOKLINE, MASS.—Property on former estate of C. S. Sargent	45
RANDOM LAKE, WIS.—Elevator, mill and other business property	65
STEVENSON, WASH.—Carson mercantile store destroyed	25
SHAWNEE, OKLA.—Vacant hotel bldg. adj. business bldgs.	45
PORTLAND, ORE.—Ballroom of Lotus Amusement Park destroyed	80
TACOMA, WASH.—Cavanaugh Lumber Co. plant damaged	60
BALSAM LAKE, WIS.—Paradise Park pavillion destroyed	25
ADDISON, ME.—Bay Shore Packing Co., plant of M. L. Calor	75
NEW HAVEN, CONN.—Business property at 218 George St.	25
NEW BRUNSWICK, N. J.—Middlesex County Courthouse damaged	45
ROCHESTER, N. Y.—Nelbach bldg. damaged	60
ANDERSON, IND.—Washington School bldg. damaged	125
JOLIETTE, QUE.—Warehouse of Barrett Co., Ltd., destroyed	250
GOSHEN, N. Y.—Broadlea school bldg. of Dominican Sisters	80
WOODLAND, CAL.—W. S. Black garage and storehouse	25
CLIFTON, TENN.—Several business establishments destroyed	45
AURORA, ILL.—Shops of Chicago, Burlington & Quincy R. R.	400
BILOXI, MISS.—Plant of Ocean Springs Ice & Coal Co.	25
BUTTE, MONT.—St. Mary's Catholic Church, adj. property	50
GALVESTON, TEX.—Several business structures destroyed	150
Week Ending September 11	
MARQUETTE, MICH.—Presbyterian Church damaged	65
ST. LOUIS, MO.—Plant of Christman Veneer & Lumber Co.	25
HAMLIN, TEX.—First National Bank, adj. property	65
BEAVER FALLS, PA.—Bldg. of Mayer China Company	100
KINSELL, B. C.—Sawmill of Marion Lumber Co. destroyed	25
ATLANTIC CITY, N. J.—Business property, 2611 - 17 Boardwalk	25
SALMO, B. C.—Salmo Hotel, adj. property	25
MEMPHIS, TENN.—Bldg. occupied by McConnel Furniture Co.	50
E. ROCHESTER, N. Y.—Frame business and apartment block	25
NANTASKET, MASS.—Shore Gardens damaged, Chas. Nelson, Prop.	25
PLYMOUTH, N. H.—Plant of Avery Lumber Co., adj. bldgs.	35
SANDPOINT, IDAHO—States Hotel, garage and filling station	30
ATLANTA, GA.—Passenger plane of Eastern Air Transport	25
GAINSBORO, TENN.—Whse. occupied by Marion Construction Co.	25
ROME, GA.—Plant of Marshall Mfg. Co., destroyed	125
COLONIE, N. Y.—Farm property of M. R. Phillips	25
KITCHENER, ONT.—Restaurant of Gettas Bros. damaged	25
CHANNING, TEX.—Considerable portion of business district	200
OAKLAND, CAL.—Whse. of Swift & Company destroyed	65

BURNING OIL BARGE ADRIFT ENDANGERS PIERS AND SHIPPING

Low Tide Prevented Two Fireboats From Private Companies From Reaching the Burning Craft — Barge Held on Sand Bar

COAL docks and shipping were considerably endangered when an explosion broke out on the oil tanker J. Norman Riley at Sewaren, N. J., after it had taken on 18,000 gallons of gasoline. The blast severely burned the captain, and also burned a steward. The men managed to make their way to safety unassisted.

The barge docked at the Shell Eastern Petroleum Products Company at 6:10 a.m. It was a short time later or at 7 a.m. that the boat burst into flames. The flames spread with great rapidity. Twenty minutes later a call was put through for the Woodbridge Fire Department. However, by the time the firemen arrived, the flames had made considerable headway, because of the highly flammable and explosive cargo, and the boat was cut adrift.

It drifted towards Acker's pier and endangered shipping in the channel. A westward wind drove the barge towards the Port Reading Coal Company docks. The tide grounded the vessel on the sand bar.

Fireboats reported from the Port Reading Coal Company and the Perth Amboy Drydock Company but they were

Oil Tanker Explosion Endangers Shipping

unable to do much good. Because of the low tide, it was impossible for the fireboats to get very close to the burning barge. The barge was freed from the bar at 10:40 a.m., and drifted northward.

On the deck of the J. Norman Riley there were two empty 20,000-gallon tanks. The tank that was filled was on a lower deck.

Stroudsburg to Have Combined Station

Work has been started on a building in Stroudsburg, Pa., which will house the Borough Council offices, Fire Department, and Police Department. At a special election held in July, the borough voted $70,000 for the construction of this building, and the volunteer Fire Department voted to contribute $20,000 towards the erection of the new structure.

The main floor will house the Fire Department. The Police Department will be in the rear with an entrance at the side of the building. On the second floor will be offices for the borough officials, and the council chamber.

Emmetsburg, Ia., to Have New Apparatus—Emmetsburg, Ia., has ordered new fire apparatus.

Fort Worth, Tex., Wants New Fire House—Included in the next budget for the Fire Department of Fort Worth, Tex., is a request that a new fire station be constructed for the Polytechnic section.

Timm Resigns as Chief of Attica, N. Y.—Frank Timm, Chief of the Attica, N. Y., Fire Department for the past five years, has presented his resignation. The resignation was effective from September 8.

CORRESPONDENCE

Why Change the Fire Box Lights?

To the Editor:

An editorial in a recent issue headed "Orange or Blue Fire Box Lights?" greatly interests me. Already in my town cries are being raised for lights over our fire boxes. We must handle the proposition shortly.

Perhaps I'm old-fashioned but I am one that doesn't believe in always following a new idea and in this particular case have not yet been convinced that any successful results will be obtained in trying to designate fire boxes by any other color than red.

In the first place I think that the so-called confusion with traffic lights is greatly exaggerated. I think it is borrowed trouble. With thousands and thousands of automobiles using the streets every day the isolated cases of motorists being held up by red fire box lights mistaking them for traffic signals are so rare that they should warrant no consideration.

As far back as can be remembered by anyone alive today red has designated two things: *danger and fire*. They are synonymous and always will be. Are those of the fire fighting profession willing and prepared to carry on a billion dollar program of education that must carry through three or possibly four generations to teach people that blue, lavender or pink mean fire?

The three generations, approximately, that are alive today can never get the confusion out of their heads. The education would have to start with the generation coming. In times of fire people are under great mental strain. Unless they instinctively know that some other color means fire they are going to look for red. All the orange paint in the world will not change that connection with the generations alive today.

Look at the conditions faced today. In order to start this vast educational program, we would have to start painting our fire appartus orange or blue, change our theatre, school and hotel and other places of public assembly so that their fire exit lights correspond with the new color; change the color of our fire boxes and other fire fighting equipment; convince people who advises fire insurance and other things that they must use an orange or blue color scheme. Unless these things are done and done almost at once, red will still mean fire and not blue or orange.

To the best of my knowledge, New York City was the first large community to change their fire box lights from red to orange; many others, like sheep following the leader, hurried to do likewise. But is New York City always right? A few years ago, an expensive and unsuccessful attempt was made there to make motorists move on yellow or red and stop on green or some such odd arrangement when the first Fifth Avenue traffic towers were installed. The traffic lights have since been changed to their normal designations. New York was wrong. It found that it could not make people think that red, yellow and green meant something other than the designations they had learned from infancy.

Unless, I believe, that a long, tedious, carefully laid plan of education is started and continued unrelentlessly, red will still mean fire in the year 2000 and all the present effort and money will have been utterly wasted.

It seems that unless we can make everybody, man, woman and child, regardless of race, creed, color or whether they have any intelligence or not, know that orange or blue means fire instinctively, we might as well take all the lights away from fire boxes. For their purpose has been defeated.

A fire might be discovered at night, for instance, by a backwoodsman from the mountains. If he knew nothing else he would instinctively know that the red light meant fire. A foreigner from another country who couldn't talk our language would know the same things. Orange or blue or any other color except red would mean nothing to them, unless they, too, had learned of the designation from childhood.

When it comes down to a final analysis, what caused the big hurry to change? Traffic and the modern motorist. We heard stories of motorists stopping for 30 minutes waiting for a fire box light to turn green. Which is more important, the extinguishing of a fire or 30 minutes of a stupid motorist's time?

Any motorist who is so thick skulled that he would watch the dull red glow of a fire box light and mistake it for the brilliant reflected light of a traffic signal is a menace and for the general public's safety should watch the firebox lights until morning comes. It is incredible to think anyone other than one intoxicated or insane would more than momentarily stop for a fire box light.

As a matter of solution, I think it is in the city of Bridgeport, Conn., that I have seen fire box lights with the words "Fire Box" in white letters painted on the red globe. No one would mistake those lights for a traffic light and yet, the color red is not disassociated with fire. Would it not be a good plan to try painting a white band, say two inches wide, around fire box lights as an experiment? Certainly that would not be confusing to motorists and would not be an attempt to upset the minds of the universe.

Truly yours,

GUY A. STEWART, JR.,
Fire Commissioner,
Town of Eastchester, Tuckahoe, N. Y.

Here is What is Meant by a "Hot Game of Cards"

Attired in asbestos suits, these two members of the Los Angeles Fire Department appear to be enjoying their game of cards even though they seem to be in the midst of flames. The fire was started by the Fire Department to illustrate the use of new carbon dioxide extinguishers.

Pacific Coast Chiefs Announce Trip

Special arrangements have been made for the Pacific Coast Chiefs who plan to attend the coming convention of the International Association of Fire Chiefs in Havana in October. Going to the convention, the Chiefs will travel by train and take a boat from Key West to Cuba. Returning, the party will travel on the Pennsylvania, the largest ship to be built under the American flag, and the journey homeward will be made through the Panama Canal. The boat will leave Havana on October 20. As the boat trip will be made on placid waters, there is no danger of being seasick.

The party will leave San Francisco for the convention on the S. P. Sunset, Limited, at 6:45 p.m., Thursday, October 8; Los Angeles, 9:25 a.m., Friday, October 9; New Orleans, 9:15 p.m., Sunday, October 11.

In the event that enough reservations will be secured, there will be a special train made up consisting of a club car, diner, standard Pullman and observation car, and it will be operated as the second section of the Sunset Limited. In any event, through Pullmans will be provided to Key West, Fla.

At Havana, the party will stop at the New National Hotel. The minimum cost of the trip including round trip fare, a lower berth on the train, and seven days at the National Hotel, Havana, including meals on the steamer but not on trains or at the hotel in Havana, is $390.88.

All Chiefs and others who plan to join the Pacific Coast Chiefs' party are directed to send a deposit of $50 per person to Jay W. Stevens, Secretary, Pacific Coast Association of Fire Chiefs, 1014 Merchants Exchange Building, San Francisco, Cal. The deposit should be mailed at the time that requests are made for reservations. The balance must be paid on or before October 1.

Fire House Opened in Elkhorn, Wis.—A smoker was held in Elkhorn, Wis., to mark the opening of a new Fire Department building.

New Day-Off Plan Postponed to 1933—The new plan of granting firemen of Seattle, Wash., one day off in six which was to have been effective from January 1, 1932, has been postponed to January 1, 1933. Firemen now get one day off in eight.

The Round Table

(*Continued from page* 684)

Blasts from our siren have not been confusing to us, or any other town or village as our nearest siren is ten miles away.

It has been reported to me by residents living five miles away that on quiet nights our blasts are heard very plainly.

H. F. Hanner, Chief, Wethersfield, Conn.: We do not have a siren for our fire alarm. We use a coded compressed air whistle. This alarm is tested every day except Sundays and holidays at 12 noon.

Our neighboring towns use a general alarm siren and a coded siren so we have no confusion. In fact, when we recently had a series of five alarms in one hour and only two recalls our neighbor, Rockyhill, Conn., four miles away, offered and sent in help without being asked to do so. Our signals have been heard and the code counted correctly a distance of nine miles.

Morris Schneider, Chief, Burlington, Wis.: We have a test of sirens at 6 p. m. each day except Saturday and Sunday. No confusion with neighboring towns has been experienced because the nearest town is seven miles. Our signal has been carried twelve miles away clearly enough to get the box number perfectly. A distance of seven miles under ordinary weather conditions is about the average to hear a call.

Martin J. McGuire, Chief, Fort Riley, Kan.: We have test calls on our siren each day at 12 noon. No confusion has resulted from blasts blown on our siren and the one in our neighboring villages.

Normally our siren can be heard a distance of two miles. If, however, the wind is strong, the siren can be heard at the average of four miles.

L. V. Rothrock, Chief, Ft. Morgan, Col.: No daily test calls are made on our siren. We have had no confusion resulting from blasts on our siren with signals in neighboring villages.

The farthest our signals have carried is four miles.

* * *

ANSWERS TO PREVIOUS QUESTIONS

The following replies are in answer to a question on the number and type of portable fire extinguishers carried on fire apparatus, and whether or not the Fire Department services the portable extinguishers in residences:

Russell Dyche, Chief, London, Ky.: Ours is an all volunteer, one company department, with all equipment on one 400-gallon pumper. We carry two 2½-gallon soda and acid, one 2½-gallon foam and one 1½-quart carbon tetrachloride extinguishers, which I consider ideal for a company similarly situated.

G. Walter Proctor, Chief, Hastings, Fla.: We believe that one portable extinguisher should be carried on each truck for each man of the crew, about half foam-type and the rest soda acid or pump type. We prefer the pump type on account of the added amount of water and the fact that it can be carried on the back and it leaves the hands free while mounting ladders or using tools.

We believe that the soda-acid and foam type extinguishers should be made larger for Fire Department use if efficient and comfortable carrying straps are attached.

Fire Departments, we believe, should service all extinguishers used in homes, public buildings, manufacturing concerns and commercial buildings. The Fire Department should discharge, inspect, repair, and recharge or junk, all extinguishers. The Fire Department should have an officer supervising it.

We service all soda-acid extinguishers free of charge and this includes the 35 and 40-gallon engines used by the crate and barrel mills. Portable extinguishers save us a lot of work and the city a lot of loss by fire and water. We service foam type and carbon tetrachloride extinguishers for the cost of the refills only—that is, the wholesale cost.

Our citizens have become accustomed to using the extinguishers and I have seen ten or a dozen used on a fire before apparatus arrived. Of course, this is true only during the day and in the business district. We find that portable extinguishers, and plenty of them, are of the greatest value to a volunteer department.

Irving C. Hammond. Chief, Westport, Mass. I feel that there is a vast difference in the needs of a city and a small town fire department. Therefore I am considering only the latter, as my experience is more or less limited to the small town.

I believe that a pumper equipped with a chemical tank or a booster tank should carry two foam type extinguishers and two pump type such as the Smith Indiana Fire Pump. The latter I find to be invaluable in protecting roofs from sparks and extinguishing many grass and brush fires, where a serious fire in a small town invariably starts. Then, too, they can not be beaten in forest fire work, by anything I have yet seen.

To my mind the pump type of extinguisher is a vast improvement over the soda and acid type extinguisher for almost all uses, and I feel that if more Fire Depuartments would try them once, the soda and acid type would soon be obsolete.

L. F. Mitchell, Chief, Danville, Va.: The department, in deciding the number and type of extinguishers to be carried on a pumper or ladder truck, should be governed by local conditions. We find the best combination for our use to be two soda and acid, and one foam extinguisher on each bumper, and one soda and acid, and one foam extinguisher on the ladder truck.

I have no suggestion for improving the effectiveness of portable extinguishers, except to say that the men should be thoroughly familiar with the different types of fires and know when to use and when not to use portable extinguishers.

I believe that the Fire Department should service small size extinguishers used in homes, because unless extinguishers are properly and regularly charged they are useless. We charge them for any person or firms at actual cost of material. We think that by doing this we are doing something to prevent fires and cut down loss.

Samuel H. Jeffries, Chief, Wilkinsburg, Pa.: Our department uses fire extinguishers called rough riders made by American-LaFrance and Foamite Company, two Babcock type 75—two on the pumper and four on ladder truck.

As to fire extinguisher improvements, I have never given it a thought. But I have changed from the old screw top to the one that is turned upside down for service, as I find it to be much faster and it never fails to work.

The Borough of Wilkinsburg charges Babcocks in hospitals and homes free of charge. If any person has an extinguisher for a private home, I would fill or refill them and there would be no charge.

* * *

The following is an answer to a question on the type of ladders used in the Fire Department, and the approximate life of ladders in the fire service:

Michael J. Corrigan, Chief, Chicago, Ill.: Herewith is the list of the size and type of ladders used by the Chicago Fire Department:

8 ft., 10 ft., 12 ft., 14 ft. and 16. ft. roof ladders.
20 ft., 26 ft., 30 ft. and 36 ft. wall ladders.
50 ft. and 65 ft. Bangor or extension ladders.
76 ft., 75 ft. and 85 ft. aerial ladders.

My own experience prompts me to answer that 8 ft., 10 ft. and 12 ft. roof ladders and 26 ft. and 36 ft. wall ladders and the 50 ft. Bangor ladders are the most useful in the fire service.

Our Superintendent of the Repair Shops states that the average life of the smaller type ladder is four years and the larger size ladders possibly six or seven years.

"Cover In" Plan Tested in Bergen County

The "cover in" plan which was studied for the past year by the New Jersey and New York Volunteer Firemen's Association, has had a successful test recently at Bergen County, N. J., when a test call came from Tappan, N. Y., and called member companies from Rockland County, N. Y., and Bergen County, N. J.

Shortly after the alarm was sounded at Tappan, eleven pieces of apparatus were enroute while others from distant points started to move in to vacated engine houses. The home company was on the ground in one minute while the most distant company made the run in twelve minutes.

After the outdoor demonstration of the plan, Chief Otto Zimmerley invited all firemen to the auditorium of the school where the test was held, to witness a demonstration of salvage, first aid and rescue work by the Nyack Patrol under the direction of Chief Charles R. Ackerman of the Nyack Fire Department. Visiting Chiefs from many nearby communities witnessed the demonstration and the operation of the "cover in" plan.

The Volunteer Fire Department

(*Continued from page 682*)

depth of several inches, the other rooms will never be bothered by the undesirable gas fumes.

To facilitate winter response of apparatus, the engine should be prevented from becoming cold.

A hot air register may be so arranged on the floor that when the apparatus is parked, the heated air will circulate underneath the apparatus hood. In heating and ventilating work, the design of units is based on the principle that cold air is heavy and hangs low while heated air rises to the top of the room. Unless this is recognized, the cold air will always be underneath the apparatus motor. Where electrical power is not expensive, the best arrangement would be to place a small portable electrical heater underneath the motor. The heater can be plugged into the circuit when the outside temperature becomes very low.

The apparatus room should be well lighted for instruction is often given to new men on the apparatus floor and it is necessary that the light reach every part of the room. If hanging overhead lights are used, the drop should be so measured that one standing up in the apparatus will not bump his head against the fixture. Wall lights add to the attractiveness of an otherwise drab room. Base receptacles should be provided.

Outside of the apparatus doors should be placed wheel guards so that the apparatus will not scrape the trim in entering or leaving the station.

Floor Space to Allow for Apparatus

The apparatus floor should be of sufficient size to permit free space around each unit. Too often Fire Department officials try to fit the apparatus to the room instead of designing the room for the apparatus. I have seen stations where the room is just long enough to contain a ladder truck, and if ever the driver will misjudge his speed, the ladders will ram up against the rear wall and be forced to the front. Then on the other hand think of the bumps the men must receive when they forget that it is necessary to stop in order to get by the rear of the ladder truck.

For a fifty-five-foot extention ladder, the average overall length is forty-one feet and the width is about 7½ feet. For the smaller size ladder truck, with a fifty-foot extension ladder, the overall length is thirty-seven feet and the width seven feet. The overall of 500 and 600-gallon pumpers is about twenty-three feet and the width is about seven feet. In spotting the apparatus units on the floor, sufficient space should be allowed between units and between the apparatus and the walls so that firemen will have no trouble in polishing the equipment or in making motor adjustments. In placing the apparatus, it should be remembered that the small pumper can make better time in responding to a fire than the more cumbersome ladder truck. Therefore, apparatus should be so spotted that the pumper will be the first to leave the fire station. And as the pumper carries small ladders, it is possible to engage in rescue work until such time as the ladder or truck company arrives with more complete life saving equipment.

The smaller houses that are to be used only for fire department work, are designed in accordance with bungalow lines. In fact some of these houses have been so skilfully planned that the average passerby would never believe that it was a Fire Department building. There is one story that has been going the rounds for some time, that a woman in a California city, knocked on the door of such a station, and inquired if the house was for rent or for sale.

The first step in the erection of a bungalow fire station is to have it follow the predominating style of the neighborhood. If most of the houses in the vicinity are of Colonial or English architecture, then the station must be of the same style.

To carry out the bungalow idea, it is necessary to disguise the appearance of the apparatus door. This has been done by having Dutch windows in the door or by giving the door the same surface treatment as the rest of the building.

For a two-story building with an attic, it is possible to have a hose drying tower as part of the building. The tower is generally finished off with a little balcony so that it will look like an extra tower room. If the station has only a ground floor, then a hose drying tower would be a distinct eyesore. In such buildings, arrangements must be made for hose drying racks. This is often placed on one side of the apparatus floor, but the placement is optional.

Reproduced in this article is an architect's sketch of a combined municipal hall and fire house that was erected in Clarion, Pa. It is forty by seventy feet in plan, is constructed of buff brick with terra cotta and stone trimmings, and has large double doors leading from the apparatus room. Entrance to the apparatus floor may be gained by either of the two side doors and the door at the left opens to a hall leading to the second floor. Radiators are set in the wall to conserve space.

On the second floor of this building is an office for the village council, a firemen's club room, a billiard or game room, and a kitchen. On this floor are also located the shower and locker rooms, and a drying room. In the belfry is mounted the fire alarm siren. The town jail is located at the back and next to it a hose drying tower.

Suggested Design for Station

A fire station of outstanding design that may be adapted to the needs of the average volunteer Fire Department has been erected in Anderson, Ind., for about $10,000. It has a high pitched roof and a separate chimney which is braced to the building for artistic effect. The station has a unique arrangement of a hose tower which is entirely contained within the building. It extends from the basement through the first floor and up under the ridge of the gable.

As a suggestion for applying this design to volunteer departments, the hallway could be extended into what is now marked as the dormitory. A toilet and shower room could be placed at the left of this room and space provided for fire alarm equipment or for other needs. The toilet space and the captain's bedroom as indicated could be converted into a kitchen and a recreation room or a reading room. The large lounge room in front may be used for informal department suppers and for department meetings.

In the basement of this building are located the workshop, hose drying room, heating plant and space for fuel.

The station is constructed with hollow-tile walls, stuccoed exterior and plastered interior.

A city having a paid Fire Department considers a fire station as a place where the men are quartered until such time as they are needed on a call. With the volunteers, the logic is entirely different. While it is primarily a place in which to house apparatus, it is also a place where the men may meet for recreation, social hours, companionship and for training in fire prevention and fire fighting. For that reason, included in the design of the fire house must be ample lounging or recreational space so that the men will have club facilities.

Selection of Building Site

In selecting a site for the station, many factors are to be considered. It should not be located near a school or hospital where it may annoy the children or patients, although in one Long Island town, the second floor of the station is being used as a schoolroom. It should not be located on the bottom of a grade so that the apparatus must go up a hill immediately after leaving the station. There should be sufficient room on the highway for the ladder truck to leave the station and make a turn into the highway. If the house is located on a very much traveled thoroughfare, the house should be set back from the street line so that the driver will be able to command a greater view when leaving the station in answer to an alarm.

The big problem of fire station design is incorporating every one's suggestion into the plans and yet have a building that can be constructed within the appropriation granted by the village fathers. But even though this may be more or less puzzling, there is no sane reason why some monstrosity should be erected and then labeled with the honorable name of a fire station. Today fire houses are beautiful and may even be termed one of the show pieces of a village. There are so many possible designs for these buildings that the house can be planned to be individualistic, practical and artistic.

The next chapter of this series will present information on the very important subject of care of fire hose.

Fire Station Opened in Chester, Pa.—A new fire station has been opened in Chester, Pa.

Apparatus Delivered to Tarrytown, N. Y.—An Ahrens-Fox 500-gallon pumper has been delivered to Tarrytown, N. Y., for the Washington Engine Company.

Cincinnati May Furnish Outside Aid—Columbia township is considering a plan to have fire protection furnished by Cincinnati, Ohio. The city wants included in the contract clauses that no liability shall be assumed by the city when responding to an alarm and that when Cincinnati companies visit the township, it shall have the status of a Fire Department of the township.

NEW YORK CITY ADOPTS MODEL MOTION PICTURE FILM LAW

New Ordinance Result of Conference by Best Minds in Fire Department, Underwriters and the Motion Picture Industry—Text of Law

By WM. JEROME DALY

(Continued from last issue)

FOLLOWING is the fourth installment reproducing the text of the New York City ordinance intended to "put teeth" into the laws relative to inflammable motion picture film. The new law represents the composite thought of the "best minds" in the fire fighting service, the insurance underwriters, the fire prevention field and the motion picture representatives themselves. It is the culmination of eighteen months of sincere, earnest, painstaking and technical efforts to get the safest regulations possible for both the industry and the public.

The title of the new law is as follows:

AN ORDINANCE to amend chapter 10 of the Code of Ordinances by adding a new article 20, in relation to inflammable motion picture film, and repealing the present article 20 of chapter 10, and subdivision 23 of section 1 of article 1 of chapter 10, relating to the same subject.

Be it Ordained, by the Board of Aldermen of The City of New York, as follows:

Section 1. Article 20 of chapter 10 of the Code of Ordinances is hereby repealed and a new article 20 is inserted in place thereof to read as follows:

Article 20

Sections 240 to 243 and part of Section 244 have already been pubilshed. Following is the continuation of Section 244:

§244. Special provisions applicable to theatres, motion picture theatres, screening or projection rooms.

2. The above quantities of film shall be stored, kept and handled as follows:

(a) Up to 15 reels, aggregating not more than 15,000 feet of film, may be kept in Interstate Commerce Commission shipping containers, or approved cabinet;

(b) The amount on hand in excess of 15,000 feet, such excess however in no event to exceed 10,000 feet, shall be kept in an approved metal cabinet with a vent to the outside of building not less than 14 square inches for each 100 pounds of film capacity and with an automatic sprinkler head which may be connected to the house supplv by not less than ¾-inch pipe; provided that the water pressure at that elevation shall not be less than 15 pounds per square inch; provided further, however, that a cabinet constructed so that each reel is in a separate compartment and will burn out without communicating fire to film in an adjoining compartment, need not be provided with an automatic sprinkler;

(c) In the special storage room, which shall be constructed, located and protected as required by the fire commissioner, the amount on hand in excess of 15,000 feet, such excess however in no event to exceed 10,000 feet, shall be stored in approved cabinets or vaults;

(d) No collodion, amyl acetate or other similar inflammable cement or liquid in quantities greater than one-half pint shall be kept in the projection booth or rewinding room;

(e) Such portable fire appliances as required by the fire commissioner shall be provided;

(f) Smoking or the carrying of a lighted pipe, cigar, or cigarette, or other form of smoking material is prohibited in booths, rewinding rooms or special storage rooms;

(g) A copy of these regulations, together with section 8 of chapter 10 of the Code of Ordinances shall be conspicuously posted in the projection booth and rewinding room;

(h) The number of projection booths that may safely be permitted in any building shall be determined by the fire commissioner. A preliminary set of plans shall be submitted to and approved by the fire commissioner before any work in connection with the construction of a screening or projection room is started. Such plans shall show the location and size of the room and also specify as to the location of all other screening rooms in the building. Upon approval of preliminary plans such number of sets of clean, corrected plans on cloth as the fire commissioner may require, not exceeding three, shall be filed for final approval of the fire commissioner;

(i) The provisions of chapter 3, and other chapters of the Code of Ordinances applicable to the storage and care of films in theatres and in motion picture theatres contrary to or inconsistent with the provisions of this article, are hereby repealed.

§245. Special provisions applicable to motion picture film studios.

Motion picture film studios shall comply with the following in addition to the general provisions of section 243:

1. Restriction on additional occupancy. No occupancy shall be permitted in the same building above a motion picture studio other than a like occupancy connected with or incidental to the studio or the business of producing motion pictures.

2. Separation from laboratories and exchanges. When located in the same building, motion picture studios shall be separated from laboratories and exchanges, both vertically and horizontally, by either fireproof walls or floors, as defined in articles 17 and 18 of chapter 5 of the Code of Ordinances. This, however, shall not exclude the use of openings protected with approved self-closing fire doors or shutters.

3. Separation from other rooms. All carpenter shops, property storage rooms, costume rooms, dressing rooms and offices in a motion picture studio shall be separated from the studio stage by fireproof partitions as specified in article 18 of chapter 5, Code of Ordinances.

4. Automatic fire doors. All openings in partitions and walls between the studio stage and other portions of the building shall be protected with automatic fire doors of an approved type. This shall, however, not prohibit the use of two automatic fire doors of an approved type, each opening not to exceed 400 square feet, for the purpose of transporting scenery, trucks, animals, etc., in and out of the studio.

(To be continued)

Gas Kills Fireman at Cambridge

Lieutenant Atkinson, of the Cambridge, Mass., Fire Department, died recently in a futile attempt to rescue an employee of the sewer department, who had been overcome in a sewer manhole. The apparatus, in command of Lieut. Atkinson, responded to a still alarm to rescue the victim, and on arrival Private Breslin attempted to go down the ladder without a mask but was overcome, and was pulled out by members of the company. Lieut. Atkinson put on a gas mask and went down the ladder into the manhole where he was overcome before being able to rescue the sewer department employee. He died from the effects of gas which the medical examiner reports as "presumably acute benzol poisoning."

Chief Casey opposed the use of masks for such service as this. Despite the fact that the cannister, used in connection with the mask, carried the warning "This cannister must not be used in atmosphere deficient in Oxygen," it was employed in the sewer manhole, where there apparently was not sufficient oxygen to sustain human life.

Chief Casey was out of the city at the time the accident occurred, and to counteract unjust criticism issued the following statement:

"I was sorry to learn of the unfortunate death of Lieutenant Atkinson, taken from our Department, who was one of the most courageous fire fighters I have ever observed. His death resulted from a devotion to duty and an heroic attempt to save human life. During the twenty-nine years of his service we had been intimate associates and close personal friends. His daring on many occasions resulted in the saving of many lives and much property.

"I am sorry to learn that an apparent controversy has resulted from Lieutenant Atkinson's disregard for his own personal welfare. During my forty-three years as a member of the Cambridge Fire Department, the last fifteen of which I have been its Chief, I have made a constant and exhaustive study of fire fighting equipment and methods of combat.

"Some have considered me obstinate because of my continued and persistent lack of confidence in the gas masks that have been demonstrated for use in our Department. It is my personal desire to have the Department equipped with the most efficient modern apparatus and protective equipment. I am willing to rely on the judgment of a committee of chemists or would suggest that the salesmen desirous of selling this equipment give a personal demonstration under actual gas conditions. It appears to me to be a drastic measure to ask men to wear equipment that has not been definitely proven to be infallible.

"It is hoped that the critics of our efficient Department will retract, and that our community will think only of the devotion and courage of my life long friend. — Lieutenant Atkinson."

Pumper Delivered to Kerhonkson, N. Y.—A new pumper has been delivered to Kerhonkson, N. Y.

FIRE DEPARTMENT ACTIVITIES

Cheyenne, Wyo., to Erect Fire Station—A new central fire station costing $42,500 will be erected in Cheyenne, Wyo.

New Riegel, Ohio, to Have Pumper—New Riegel, Ohio, has ordered a new triple combination pumper.

Arcadia, Cal., to Have New Station—Plans are to be drawn for a new fire station that will be erected in Arcadia, Cal.

Eggertsville, N. Y., to Have New House—Work has been started on a new fire station for Eggertsville, N. Y. It is expected that the work will be completed within six months.

Fire House Opened in Cotati, Cal.—A lamb barbecue was held in connection with the opening of the new fire house in Cotati, Cal.

Hartford, Ind., to Have Rural Truck—Special apparatus will be provided in Hartford, Ind., for the protection of rural property.

Waverly, Ia., to Buy Rural Truck—New fire apparatus for the protection of rural property, has been purchased by Waverly, Ia.

Cincinnati to Protect Elmwood Place—The suburban community of Elmwood Place may receive fire protection from Cincinnati, Ohio, if a contemplated contract is approved.

Miles, Ia., Fire Department Demonstrates Pumper—The new pumper of the Miles, Ia., Fire Department was recently demonstrated.

Crockett, Cal., May Unite Fire Districts—Petitions are being circulated in Crockett, Cal., for the consolidation of the three fire districts.

New Apparatus Urged for New Castle, Pa.—The purchase of new fire apparatus has been recommended for New Castle, Pa.

Linwood, Pa., May Have Another Company—It is probable that Linwood, Pa., may have two fire companies as the result of a dispute within the Linwood Fire Company which has been brewing for a year.

Tombstone, Ariz., to Install Boxes—New fire alarm boxes will be installed in Tombstone, Ariz. The boxes will operate an indicator at the power house and an attendant there will have charge of the whistle.

Newton, Kan., to Have Joint Apparatus—The city and township of Newton, Kans., have contracted to operate joint fire apparatus. The city mans the apparatus and uses it for fighting fires in both the city and the township.

Williston Park, N. Y., to Buy Apparatus—Williston Park, N. Y., has sold a $15,000 bond issue to finance the purchase of a combination ladder, hose and chemical truck. The apparatus will also carry first aid equipment.

Los Angeles Denies Plea for New Station—The Fire Commission of Los Angeles, Cal., has denied the petition for the establishing of a fire station at Cahuenga Boulevard and Hollywood Way.

Preston, Ia., to Have Rural Apparatus—Preston Ia., will soon have apparatus for the protection of rural property. Fifty farmers of the vicinity contributed half of the purchase price.

School to be Held in Ft. Dodge, Ia.—A one day school for firemen will be held in Fort Dodge, October 1. Departments within seventy-five mile radius of the city are to be invited to attend.

Beaumont, Tex., to Open Three Stations—Beaumont, Tex., is to open three new fire stations. Each house is of the bungalow type and each is to have attractive lawn and flower beds.

Farm Fire Protection Meeting to be Held—The Farm Fire Protection Committee of the National Fire Protection Association will hold its next meeting October 13 in Chicago. Dr. David J. Price, of the U. S. Bureau of Chemistry and Soils, Washington, D. C., is chairman of the committee.

Plans Approved for Parkersburg Stations—Plans have been approved for the construction of two new fire stations in Parkersburg, W. Va. Both stations will be two-story structures. Construction bids will be opened at an early date.

New Apparatus for South Bend, Ind.—An order for a triple combination 750-gallon pumper for South Bend, Ind., has been placed by Chief Roy A. Knoblock to replace a pumper now in service. It will be Pirsch equipment mounted on a Pierce-Arrow chassis.

Green Uniforms for Fire Department—Sage green uniforms will be worn by members of the mountain service division of the Los Angeles Fire Department. The authorized uniform is similar to that of the federal forest ranger and was recommended by Chief Ralph Scott.

Connell, Cleveland Fire Warden, Retires—Thomas F. Connell, Chief City Fire Warden of Cleveland, Ohio, and a member of the department since May 3, 1888, has resigned. It is believed that this move was prompted by the absence of his very close friend Ex-Chief Wallace from the station. Connell was placed on a pension of $2,834 a year.

Spirit Lake, Ia., Takes Care of Outside Runs—The Council of Spirit Lake, Ia., has voted to have its Fire Department take care of all lake and rural fires. A new fire apparatus has been secured well suited to this work and the department will receive $25 for every run of five miles and $5 extra for each additional mile.

Hawkeye, Ia., Considers Rural Apparatus—The Fire Department of Hawkeye, Ia., is considering the plan of equipping fire apparatus to fight fires in the surrounding rural districts, if financing arrangements can be perfected. Several of the farmers have signified their willingness to contribute to such a fund.

Conneaut, O., Wants Life-Saving Equipment—Chief R. R. Warren of Conneaut, Ohio, has recommended the purchase of a metal boat, a resuscitator, two gas masks, two large first aid kits and sundry equipment for life saving. A special squad of the Fire Department and two men outside of the department have been trained in resuscitation.

Safety Congress to be Held in Chicago—The annual meeting of the National Safety Council will be held in Chicago, October 12-16. A session will be devoted to fire prevention on Friday morning, October 16. A program may be obtained by writing to the National Safety Council, 20 North Wacker Drive, Chicago, Ill.

Bexley, O., to Form Fire Department—Bexley, Ohio, is considering the formation of a Fire Department. Previously fire protection was furnished by Columbus, but the two municipalities have failed to agree upon the price for this protection. Columbus wants $21,000 for this service and Bexley is willing to pay $17,500.

More Firemen for Warren, Ohio—With the opening of new fire station in Warren, Ohio, the City Council has approved the appointment of five more firemen. The pay of first year firemen has been cut from $160 a month to $140 a month. There will be be five captains at a salary of $2,202. This brings the strength of the Fire Department up to thirty-nine men.

Junior Department Started in Ft. Collins—A junior Fire Department has been organized in Fort Collins, Col. The members are Boy Scouts who have earned their merit badges in firemanship. The Chief will train the boys in ladder drills, handling of small hose, use of extinguishers, rope work and other details. As a personal gift, Chief Treadwell will provide badges for the boys. Certificates will also be awarded.

Hyattsville, Md., to Have Drill Tower—A four-story frame fire tower is to be constructed in Hyattsville, Md. The Ladies Auxiliary has offered to pay the expenses of two firemen to a training school. The Washington Fire Department has invited two of the local firemen to attend the school, and the auxiliary will pay the men for the their loss of wages while attending the school, and it will also pay the expenses of the men.

Stick to Line in Fighting Fire—When a fire was discovered on farm property that straddled a boundary line, the Fire Departments of Berea and North Olmsted, Ohio, responded. Each department fought the fire on its own side of the line, and even though at times, water from the nozzle threatened to drown the firemen on the other side of the imaginary line, no complaints were made. Both departments followed out their orders that the apparatus was not to leave the town limits. As one newspaper remarked, "Both departments carried on, and the fact that the stacks and the garage were destroyed is only incidental anyhow."

The Chief Says—

WE'VE used these Smith INDIAN Fire Pumps for a long time, and believe me there's nothing like them for putting brush, grass or rubbish fires out in a jiffy. Lots of times we just use our INDIANS and never lay a section of hose.

"They're great for getting at awning or roof fires, too. Strap one of these pumps on your back and your arms are free for going up ladders and climbing around.

"Since they only use water and no chemicals, INDIANS can be refilled again and again. A carrying rack bolts right on the running board of the truck and makes the outfit complete.

PATENTED

"Write the manufacturers for all the dope on these high class pumps. You'll be surprised how little they cost. We're getting a new shipment."

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The Smith
INDIAN
Fire Pump

D. B. SMITH & CO., 417 Main St., Utica, N. Y.
Pacific Coast Agents—Fire Protect. Eng. Co.
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7451 Willoughby Ave., Los Angeles
Marion Bldg., Seattle

Reduce WATER DAMAGE & INSURANCE RATES with

Shuredry SALVAGE COVERS

"Back in May of last year, after having heard so much about salvage work by the fire department, and after having given considerable thought to the fact that three times as much damage is done at fires by water as by flames, I decided to introduce salvage work in my department, and immediately purchased several of your No. 2 SHUREDRY GREEN-BAK salvage covers, size 12' x 18'.

"Since that time, we have saved from water damage thousands of dollars worth of valuable merchandise and household effects for the citizens of Johnson City, and I am so thoroughly sold on salvage work today, and on your SHUREDRY salvage covers, that I would not sell the covers now for $100.00 apiece if I could not buy more to replace them. What I want to do is to add more covers and save more goods from water damage, because this will enable me to make a better showing at the end of the year by reducing my annual fire-loss report.

"I cannot too strongly recommend salvage work and SHUREDRY salvage covers to the other fire chiefs of this country."

Chief, Johnson City, Tenn., Fire Dept.

75% of the nation's annual half-billion-dollar fire loss is traceable to Water Damage. Send for Shuredry samples today.

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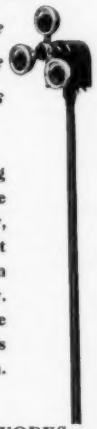


ROTO-RAYS JR. is now available for chiefs' cars, ambulances, Police Dept. Vehicles and the smaller types of fire apparatus

An absolutely distinctive signal identifying your apparatus at night. "Roto-Rays" — three revolving red lights—is seen many blocks away, even in congested traffic, and gets you the right of way. There's no mistaking "Roto-Rays," an inexpensive protection of life and property. "Roto-Rays" and a Buckeye Whistle make the most effective combination of warning signals in existence. Write for complete information.

BUCKEYE IRON & BRASS WORKS
324 E. Third Street Dayton, Ohio

BUCKEYE
WARNING SIGNALS THAT WARN

PROPOSED IMPROVEMENTS

Erie, Pa.—Necessity for additional fire station in Sixth ward has been cited by Fire Underwriters, according to reports. W. G. Haas, Safety Director.

Fort Worth, Texas—Budget for next fiscal year, as submitted by fire department, includes request for construction of new district fire station in Polytechnic. S. Ferguson, Chief of Fire Dept.

North Apollo, Pa.—Volunteer fire department organized here with Kirk Beck as president. Funds to be raised for purchase of equipment.

Sioux Falls, S. D.—City Commission has provided for erection of fire station in south part of city, according to reports. Geo. W. Burnside, Mayor.

Gorham, N. Y.—Gorham Fire District to vote on purchase of new truck for Gorham fire department, according to reports.

Franklin, N. C.—Town may be in market shortly for fire hose, according to Geo. Dean, Town Clerk.

Gastonia, N. C.—City may be in market shortly for fire hose, according to C. E. Rhyne, Supt. Water Works.

Bexley, Ohio—A $75,000 bond issue for constructing and equipping building to house fire department and municipal offices will be voted upon at Nov. 3 election.

Waterbury, Vt.—Reports state city to purchase new pumper for fire department.

Position Wanted

Young married man having years of experience on American-La France fire engines desires position as department mechanic. Address: Box 410, c/o FIRE ENGINEERING, 24 West 40th St., New York City. 9-16

CONVENTION DATES

Sept. 18-19—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Atlantic City, N. J. Secretary, William Exall, Room 602, Chamber of Commerce Building, Newark, N. J.

Sept. 18—NEW JERSEY STATE FIRE CHIEFS ASSOCIATION. Annual Meeting, 8 p. m., Atlantic City Auditorium, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Sept. 21-23—TENNESSEE FIREMEN'S ASSOCIATION. 1st Annual Convention, Nashville, Tenn. Secretary-Treasurer, Joe J. Martin, Nashville, Tenn.

Sept. 21-24—OHIO FIRE SCHOOL. 2nd Annual Fire School, Ohio State University, Columbus. Address, Chairman Fire School, Harvey Walker, at the University.

Sept. 21-25—NORTHWEST FIRE SCHOOL. 4th Fire School, University of Minnesota, Minneapolis, Minn. Address, Director of School, Room 16, University Library, Minneapolis.

Sept. 22-24—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Lynn, Mass. (Sessions at New Ocean House, Swampscott.) Secretary, Daniel J. Looney, Room 1043, Old South Bldg., Boston, Mass.

Sept. 23—CENTENNIAL PARADE, PEEKSKILL, N. Y., FIRE DEPARTMENT. 100th Anniversary, Cortlandt Hook & Ladder Co., Parade and Celebration, Peekskill, N. Y. Chairman, Program Committee, Frank I. Jewell, 958 Paulding St., Peekskill.

Sept. 24-26—LOUISIANA STATE FIREMEN'S ASSOCIATION, 26th Annual Meeting, Haynesville, La. A. J. Bethancourt, Secretary, Houma, La. J. C. McEachern, Haynesville, La., Exhibit Information.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA, 52nd Annual Convention, Wilkes-Barre, Pa. Secretary, Charles E. Clark, 411 Bellevue Ave., Wayne, Pa.

Oct. 12-16—NATIONAL SAFETY COUNCIL. 20th Annual Safety Congress, Chicago, Ill. Director, W. H. Cameron, Headquarters, 20 North Wacker Drive, Chicago, Ill.

Oct. 14-17—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 59th Annual Convention, Plaza Hotel, Havana, Cuba. Meeting Hall, Asturiano Club. Recording Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Charles A. McGinley, East Orange, N. J.

Oct. 15—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention, Havana, Cuba, at the same time as I. A. F. C. Secretary, Chief Ray Tiller, Waterloo, Ia.

Oct. 20-22—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Norfolk, Neb. Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Oct. 20-22—RAILWAY FIRE PROTECTION ASSOCIATION. 18th Annual Meeting, Cleveland, Ohio. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio Railroad, Baltimore, Md.

Oct. 28—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY, N. Y. Monthly Meeting. Fire Headquarters, Peekskill, N. Y. Secretary-Treasurer, E. Riviere, Fire Headquarters, Larchmont, N. Y.

May 9-12, 1932—NATIONAL FIRE PROTECTION ASSOCIATION. 36th Annual Meeting, Atlantic City, N. J. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 11, 1932—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 3rd Annual Convention, Cape Charles, Va. Secretary, W. A. Karpa, Cape Charles, Va.

June, 1932—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION, 60th Annual Convention, Gibsonburg, Ohio (exact date to be decided later). Secretary, Harry Smith, Supt., Water Works, Port Clinton, Ohio.

June 21-24, 1932—ILLINOIS FIRE COLLEGE. 8th Annual College, University of Illinois, Champaign-Urbana, Ill. Director, Prof. L. H. Province; Secretary, Asst. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

New Fire Department for Prebble, Wis.—A new volunteer Fire Department has been formed for Prebble, Wis. The township recently erected a new station and purchased a new pumper.

Firemen Inspect Buffalo Plant

Members of the Southwestern Association of Volunteer Firemen which recently held a three-day convention in Lancaster, N. Y., made an inspection trip of the enlarged plant of the Buffalo Fire Appliance Corporation at Buffalo, and were entertained at a buffet luncheon by the company.

The convention was welcomed to Lancaster by Mayor Ralph R. Young who is also Vice-President of the fire appliance corporation. After a brief business session, the entire convention was invited to visit the factory in Buffalo. Over four hundred delegates and Chiefs were brought to the plant from Lancaster and after enjoying an opportunity to see how the Buffalo fire apparatus and equipment is built,

Recently Completed Addition to Plant of Buffalo Fire Appliance Corporation at Buffalo, N. Y.

they were entertained at a buffet lunch served on the main floor of the new addition.

Mr. Stephens, President of the Company, said the newly completed addition will give the company much needed room for manufacturing and offices to care for their growing business.

Receiver Asked for Robinson Company

One of the stockholders of the Robinson Fire Apparatus Manufacturing Company, of St. Louis, Mo., has asked the Circuit Court to appoint a receiver to conserve the assets of the corporation. Rennard L. Heydt, former president and general manager of the company, died April 18th, and a successor has not yet been elected.

New Trade Literature Received

The Gamewell Co., Newton, Mass.—Illustrated folder describing the experiences of Port Jervis, N. Y., in increasing the percentage of box alarms from one per cent to 97%.

W. Easton, Pa., to Open Fire Station—A new fire station is to be opened in West Easton, Pa.

Chester, Pa., to Receive Ladder Truck—A Mack aerial ladder truck is to be delivered to Chester, Pa.

Taunton, Mass., to Buy Pumper—Bids were opened in Taunton, Mass., for a new pumper.

Houston, Tex., Wants New Station—Fire Commissioner Delery of Houston, Tex., has ordered plans pushed for the construction of a new No. 3 fire station.

Bids Opened in Perrysburg, Ohio—Bids for new fire apparatus were opened by Perrysburg Township, Ohio. Forty-two bids were received.

Freeport, N. Y., to Have New Fire Station—The cornerstone has been laid for the new fire station for Freeport, N. Y. The building will be two stories high and will cost $35,000 to complete.

Yonkers, N. Y., May Change Pension Rules—Frank B. Devlin, Public Service Commissioner, Yonkers, N. Y., is working to have changes made in the pension rules of the Fire Department. He wants the pension to widows increased from $300 to $600.

May Form Cooperative Association—At the last convention of the Wisconsin Fire Chiefs' Association, plans were presented for a cooperative association on the order of some mutual aid groups now in existence. Members of the associations would include Fond du Lac, Milwaukee, Sheboygan, Manitowoc, Oshkosh, Neenah, Menasha, Appleton, Green Bay, Oconto, Marinette and Menominee, Mich. The sponsor of the plan said that such an association is needed to better protect Fox River Valley cities.

Bi-Lateral Fire Hose

The one hose that does not require frequent replacements. Always reliable for fire service no matter how old, if the jackets are intact.

Lined with three rubber tubes, specifically guaranteed for six years.

BI-LATERAL FIRE HOSE CO.

15 Park Row, New York, N. Y.
20 N. Wacker Drive, Chicago, Ill.

Saves time - *and costly hose*

No. 1. (Capacity 3 to 7 tons; weight, each, 72 lbs.)

No. 2. (Capacity 3 to 12 tons; weight, each, 118 lbs.)

Complete information and Prices on request.

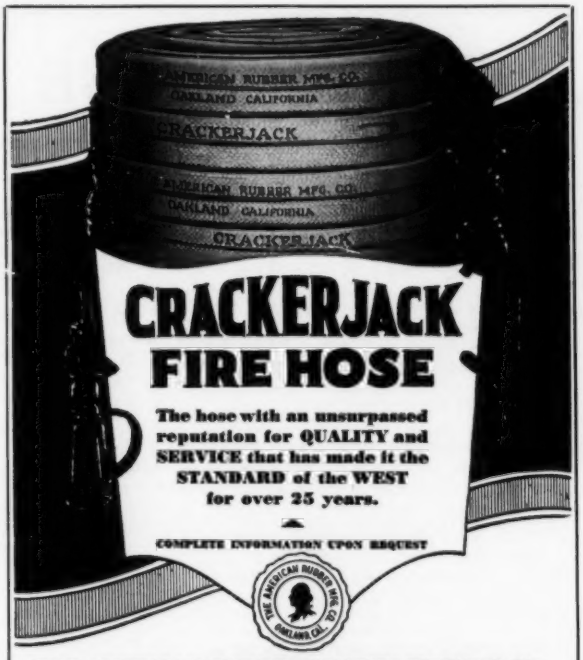
It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

The Wausau Protector is a big time and money saver—easy to handle and carry. Order a set today, or write us for particulars

Wausau Fire Hose Protector Co.

1520 Harmon Place, Minneapolis, Minn.



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Larkin shut off nozzles alone are in service in over 5,000 fire departments in U. S. and Canada.

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Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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Woven and lined to flatten and fold easier, closer and with least injurious effects. Mass-woven to combine maximum strength with flexibility. Write for details.

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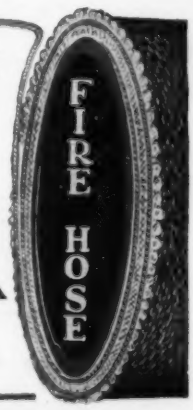

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FALSE ALARMS

GEE WHIZ!

"I don't see why the Fire Chief got so sore that we announced he was going to retire from the Department," said the City Editor to a member of his staff.

"Oh the article was all right," was the answer, "but some fool down in the make-up room put the story under the heading of 'Public Improvements.'"

And you never see wooden Indians in front of cigar stores any more. They're all in railroad information bureaus now.

QUICK RESULTS

The boys were discussing the methods to follow for winning the favor of the "lady fair." As a means of summarizing his argument, one said:

"Just remember that old nursery rhyme: Candy is dandy, but liquor is quicker."

There's one good thing about customs inspectors; they slap too low to affect your sunburn.

IMPOSSIBLE

Smoke had been discovered in the country hostelry. The owner went down the long corridor to awaken the guests from their sleep. He knocked excitedly on one door.

"Wake up. Quick. Wake up," he shouted.

"Can't" came an answer from within.

"Why not?" asked the proprietor.

"I ain't sleeping."

A modern girl is one who can meet the wolf at the door and come out with a fur coat.

A CASE OF NERVES

A Fire Department officer was very much disappointed that his son who was in the rookie class, did not make better progress at the school. It was the father's one ambition that his son should grow up in the service. He called to speak to the Drill Master.

"But John," he asked the instructor, "is my boy really trying?"

"Very," answered the drill master.

Long and assiduous scientific research has led us to the conclusion that the infant who used to tug at her mother's skirt to attract attention now does the same to her own.

THE LOW DOWN

When the Wednesday Afternoon Bridge Club met in Mrs. Daffny's home, the club members were very much surprised at the large amount of Fire Department gossip that she knew. In fact she knew the choice bits that many a village editor would like to publish, but lacked the courage.

"I don't see how you know so much about the Department?" remarked one of the new members.

"Oh, I just look after the parrot when the boys go off to their county tournament or to their parades."

"The mercury was down to 40 this morning."

"Is that a fact? I'd advise you to sell it and take your loss."

MISUNDERSTOOD

Even at the hospital, MacGregor could not forget the habits that he had developed after many years. He landed at the hospital through no fault of his own, but that is not the main part of the story.

As the nurse went by his bed, he called to her:

"Gee, but I'm thirsty."

"Just a moment," she answered, "I'll get you some water."

He replied, "I said I'm thirsty, not dirty."

A ladies' fashion expert is a person who can get more style out of less material.

INNOCENT

For some time, the Fire Department had been pestered by motorists who delighted to race fire apparatus to the fire. A clean-up campaign was started to end this trouble, and a young colored fellow was caught in the net.

The judge asked, "Guilty or not guilty?"

"Not guilty, suh," answered the negro.

"Ever been arrested before?"

"No, suh. Ah nevah speeded befo'."

Many a dull wife will make a very merry widow.

—Drawing by "Art" Espey

Battalion Chief: "What's the idea, Chief? Masquerade or lodge initiation?"
Chief: "Neither. I'm all ready to attend the I. A. F. C. convention in Havana and I want to be prepared if they stage any of them Cuban resurrections or whatever you call 'em."

YOUR CATALOG PAGE

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2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
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8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
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27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
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30 Cutting & Welding Equipment Blow Torch.
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33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
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42 Fire Exit Devices, Door Opening.
43 Fire Alarm Posts.
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48 Flashlights, Hand.
49 Foam Generating Apparatus.
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105 Triple Combination Pumping Cars.
106 Uniforms.
107 Water Towers.
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109 Whistles, Fire Alarm, Compressed Air.
110 Whistles, Fire Alarm, Steam.
111 Whistles, Fire Apparatus.
112 Wrecking Trucks.

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Made of medium blue TubTest (fast-color) chambray or dark blue TubTest percale; with collar attached or with two detachable laundered collars to match. This SIGNAL, now specified by Fire Chiefs all over the country, is favored because it is both dressy and practical.

JOHN RISSMAN & SON
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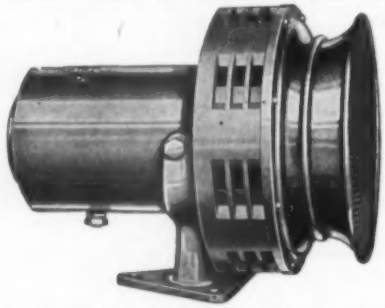

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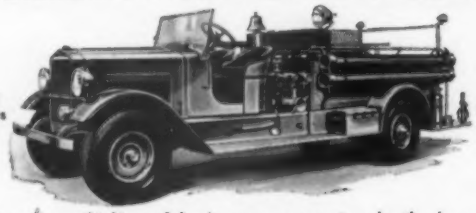

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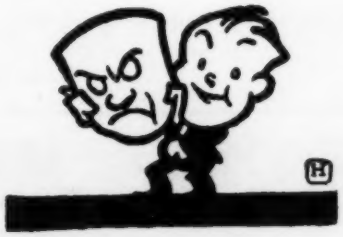

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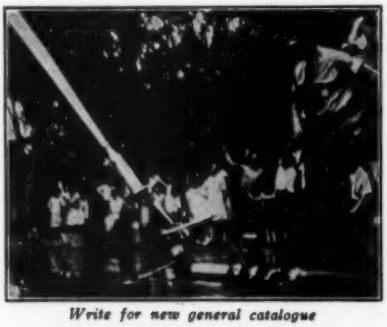

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